

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[PRICE 6D.

UNION TIN SMELTING COMPANY.—Notice is hereby given, that the HALF-YEARLY GENERAL MEETING will be HELD here on Wednesday, the 8th day of October next, at Two o'clock precisely, when the statement accounts and the Company's affairs will be submitted. F. WATSON, Secretary, *Salvador House, London.* August 27 1891.

SUBSTITUTION OF CAST-IRON FOR WOODEN SLEEPERS.

BY H. W. KENNARD, ESQ.

[Continued from last week's Mining Journal.]

An experiment has been in operation for more than five years upon the Versailles Railway (rive gauche) on a curve of 800 yard radius, a gradient of 1 in 250—and upwards of 100 yards in length. Another has been made upon the western line, Viroflay and Versailles, including two curves of 700 or 800 yards radius, on a gradient of 1 in 100. The length is about a mile and a half. Over both these sections of iron-road the traffic has been very considerable and incessant.

At Mendon, upwards of 25,000 trains have passed without producing any visible effect upon either chairs or sleepers. In order to establish a comparison between the iron and wooden roads, at Viroflay the iron sleepers have been laid on a parallel line alongside with the best selected specimens of oak, of the largest size, and the two lines have been carefully kept in the same condition, by the same men, and have sustained the same trains and traffic. The cost of sustaining the road is nearly one-third less upon the iron line. The public authorities and chief engineers have watched these interesting experiments with the utmost vigilance, and have published reports upon them, from time to time, expressing in the strongest terms their unqualified approbation.

In England, it appears 38 miles of iron-road have been laid down on the Ashford and Hastings line; and on the Greenwich, Gravesend, and Rochester, and the main line and branches above five miles; the description of sleeper permanently used is the half-sleeper, bolted together, by which the use of the wooden key is avoided, and the cost of maintenance reduced. The original cost, however, is 200l. per mile more than where the wooden key is used. The report of the engineer of the Ashford and Hastings line is very satisfactory; stating that the road stands well, that no sleepers have been broken, and that the cost of laying is less than that of an ordinary sleeper road. Upon the Midland and South Eastern Railways there has been laid down one mile and a quarter of the construction with a wooden key, described in experiment 3, showing that a reduced weight of iron may be used; the joint sleepers on the Midland Railway being 187 lbs. weight; yet with this lightness of metal not a single case of breakage has occurred, although the heaviest traffic of the line passes over them at full speed. This gives a weight of 258 tons per double mile, for seven chairs in a 15 ft. length of rail, or two more supports in a length than are given in an ordinary sleeper road. The cost of a double mile of line with a 70lb. rail will be reduced, by this difference of weight, to under 2600l. per mile for a double line. If the form, to avoid the use of the wooden keys, is adopted, the weight of cast-iron is increased about 35 tons per mile, but the cost of maintenance will be thereby reduced.

We have now briefly exhibited the facts of the case. Much, of course, remains to be accomplished. It is a great point, however, both to perceive clearly our false position, and to get a move in the right direction. Let us sum up, then, the conclusion at which we have arrived. The importance of the question at issue will justify the tediousness of repetition. We conclude, then, that the objections to the wooden substructure are so many and serious, that sooner or later some other material must be adopted in all cases of renewal; that wooden sleepers, from the very nature of their material, and from their position under the surface, being exposed to the damp and drainage of the line, rapidly decay, and require frequent renewal, involving thereby both expense and derangement upon the line; that the use of wood does not, as was erroneously assumed, diminish the severity of the blows of the engine, by combining the rigidity of the iron rail and chair with a soft yielding elastic substructure. On the contrary, the perpetual hammering of the chairs on the soft wood destroys the latter, increases the looseness of the parts, and involves the gradual but certain destruction of the whole apparatus. The effect of the elastic foundation is to allow gravity to act on the engine and put it in a state of oscillation. The weight compresses a rotten sleeper, and the centre of gravity of the engine descends, and having again instantly to ascend, a jumping destructive motion is produced, in the place of a rolling motion, which is harmless to the rail. That the present system is composed of too many pieces, in consequence of which a disturbance of the sundry parts is soon effected; whereas it is highly important, and, indeed, quite obvious, that the utmost possible unity and continuity of structure should be aimed at in the construction of the permanent way. That iron is wholly free from the objections existing to wood, as employed for the support of railway chairs. That by constructing a wrought-iron rail, rolled wide enough to form its own sleeper, or some other equivalent construction, a greater or less perfection can be arrived at, as to intermediate supports and jointings, so as to accomplish the desired unity and continuity of structure. The evils resulting from the looseness of the parts become thus completely obviated—the blows of the engine are reduced to something inappreciable as we approximate more and more to the perfect smoothness of those surfaces in contact during the passage of the locomotive—the traction is reduced, and the comfort of the passengers materially increased, whilst the whole machinery is saved from that rapid deterioration and destruction consequent upon the present system of timber substructure. That the simplicity in the construction of the iron road, resulting from the reduction in the number of its parts, combined with facility of drainage and repair, cannot be over-estimated in the practical management of a railway. That the economical importance of using a mineral instead of a vegetable substance in the substructure, is evident from the fact that in estimating the expense of renewal, the decayed wooden sleepers are valueless; whereas, the iron, although deteriorated by wear, has lost little of its weight, and can be easily re-manufactured. Indeed, the difference in cost, as we have said again and again, between wooden and iron sleepers, both in the construction and maintenance of railways, is so enormous that it can no longer be overlooked by parties superintending the working of the system. In the original outlay we have an economy of 55l. per mile per annum; and in the maintenance at least 30l. per mile per annum, making a total of 85l. per mile per annum saved, exclusive of the saving of locomotive power, in this department alone, of the expenditure, and we doubt not this sum will be further increased as science perfects and simplifies the system. Now, as it is pretty certain that at a period not very remote there will be at least 10,000 miles of railway in the United Kingdom (not including, as we have already stated, private railways, mines, &c.), the sum economised will be no less than 850,000l. per annum, representing a capital of 17,000,000l., at 5 per cent. Surely this must be regarded as an important benefit, conferred not only upon the shareholders, but upon the public at large, in requiring such an enormous sum from what may be justly viewed as unproductive expenditure, and, consequently, adding so many thousands a year to the productive wealth of the country.

There is another question of importance connected with the industrial interest of our country opened up by this discussion. The very large sum of money transferred annually from the wooden to the iron road would constitute a most valuable direction of capital to our own native mineral production, instead of expending the same upon foreign timber.

This fact, which we have only thrown out suggestively, however, merits consideration from all those who feel interested in the prosperity of our manufacturers and artisans.

STEAM-CARRIAGES ON COMMON ROADS.—Before a railway locomotive ever ran, we happened to have the opportunity of riding on a steam-carriage made for common roads. At that time all the chance was in favour of the latter; and as for the former, they were looked upon as such doubtful subjects that it was boldly maintained by many that they would not run at all, and that the wheels would merely go round on the rail, without carrying forward the machine. Now it is common road steam-carriages that are looked on as not very hopeful subjects. Yet had not the locomotive of the rail gone a-head, and its doing so "stopped the way" of the steam-carriage, it is hard to say what might have been the result. There might have been by this time, no such thing in existence either as a dog-cart or a donkey, an omnibus or a cab. At least, we might have now, perhaps, been riding in our own proper steam-gig on "her Majesty's highway" open to all, in place of running in grooves, which can no longer lay efficient claim to that ancient British title. Tarapikes, however, are looking up. The fifty-six passenger omnibus, be it remembered, has dared to compete with even the iron horse and his winding rattle-snake train. But more than that, the cause of the common road steam-carriage is not even yet deemed desperate, as, we are pleased to find, through the aid of the Mayor of Bath and several influential members of the corporation and others, that an experimental carriage will, in a few days, be commenced in Bath, and is expected to be completed for trial in six or eight weeks.

AMPUTATION AGAIN PREVENTED BY HOLLOWAY'S OINTMENT AND PILLS.—Extract of a letter from Mr. S. Smith, 69, Chapel-street, Dublin, dated March 13, 1850:—To Professor Holloway.—Dear Sir: I think it only my duty to inform you and the public of the wonderful cure your ointment and pills have effected on me. For three years I had a dreadful wound in my leg. I tried all the most eminent of the faculty in this city, but to no purpose; they informed me that nothing could save my life but amputation. I was then advised by a celebrated doctor to use your remedies, which, in a brief period, have healed my leg, and made it as strong as it formerly was. Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London.

ELECTRO-MAGNETISM AS A MOTIVE-POWER.

We have now for some years had to notice the progress of electro-magnetism applied as a power for propelling machinery; and although, to a certain extent, some of its most persevering experimenters have been practically successful, the great desideratum, unlimited power, with less cost than steam or other motive forces, has not been yet attained. Jacob, Davison, Hjorth, and others in England, and Professor Page in America, have all proved the perfect practicability of the application of this principle as a motive-power—the point yet to render it complete being its economy; and from an announcement in our advertising columns of this day, it will be seen that Mr. F. S. Beatty, of Dublin, is so satisfied that he has solved the great problem, that he proposes the formation of a "British Electric Power Company," to work the patents under which he has secured his inventions. From the necessary time for specification not having yet expired, we are unable to give any description of the plans adopted; but we are informed that, by the introduction of certain principles, which have hitherto been overlooked, or, at all events, not adopted, the inventor has succeeded in removing the obstacles which have in all former attempts prevented the full and effective application of this power. We shall wait with some anxiety the announcement of the means adopted by the patentee, as in space and safety we have no doubt of its superiority—the great question being power and corresponding economy.

M. Aristides Dumont, engineer of the Ponts et Chaussées, has also been making some comparative experiments with electro-magnetic engines, for the Paris Academy of Sciences. The first was on a fly-wheel of cast-iron, mounted on a wooden frame, and supplied on its circumference with 26 plates of soft iron, with wooden ones placed between them, to protect the periphery from the action of the magnetism. The current was sent successively to the electro-magnets by an electro-distributor, or ordinary commutator, placed on the axle of the machine. The other machine had a direct movement, consisting simply of an electro-magnet and its armature; the magnetic attraction operated on this without decomposition or loss, but the fly-wheel gave an immediate rotary movement without any intermediary machine. The development of power by the wheel was 0.20 of a kilogramme, or 7/3 grammes of zinc per hour, and 16 elements were employed in the battery. With the second machine only six elements were employed, which gave a power of 0.71, and consumed 10.70 grammes per hour. The author deduces from these experiments that although electro-magnetism cannot compete with steam, small power machines might be usefully turned to account in many trades, and for numerous mechanical operations where moderate forces only are required.

ELECTRO-MAGNETIC AND MAGNETO-ELECTRIC APPARATUS.—Mr. W. Millward, of Birmingham, has just specified his patent, which consists—1. Of an improved method of charging or magnetising iron and steel bars to be used as permanent magnets or electro-magnets. 2. Of certain new forms of electro-magnetic machines. The first branch of the improvements is carried into effect by the employment of an electro-magnet formed by a current of electricity produced from a magneto-electric machine, instead of that generated in a voltaic battery; and such an electro-magnet may be very advantageously used for magnetising large bars of steel, or for producing very powerful magnets. Any of the known forms of magneto-electric machines will serve thus to convert a bar of steel to an electro-magnet, but the patentee prefers to use one composed of four, eight, or any other number of permanent magnets, having double the number of armatures, and coiled with strong wire of about 60 feet in length. The machine about to be described has been found to answer well in practice. In this machine, the steel magnets are composed of eight plates of a U form, weighing about 30 lbs. each plate, and there are eight such compound magnets, all the north poles of which are arranged on one side of the machine and the south poles on the other side, although this precise arrangement is not essential, and may be varied. The armatures are of soft iron, weighing about 15 lbs., and are coiled with about 60 ft. of copper wire, of No. 4 gauge, and insulated in the usual manner. The armatures revolve in a brass wheel, and are caused to pass as near to the poles of the magnets as practicable, the commutator or break acting on the whole eight magnets at the same instant, so that the current of electricity shall always pass in one direction, and the surfaces of the whole of the 64 plates be in combination at the same time. The bar of soft iron used as the electro-magnet with this machine weighs about 500 lbs., and is coiled with bundles of about 30 copper wires of No. 16 gauge, and about 60 feet in length (the bundles are formed by binding a series of uncovered wires together into one covered strand or bundle), and the power of the electro-magnet will depend upon the power of the permanent magnets used in the machine, both as to the weight it will support from a keeper, and as to its capability of rendering bars of steel permanently magnetic by contact therewith. It will, therefore, be evident that by having two sets of the permanent magnets, and changing them in such machine, their supporting power may be increased by continued charges or passes from the electro-magnet thus produced. In one form of electro-magnetic machine represented and described under the second head of the invention, the steel bars or permanent magnets are eight in number (these bars may be of cast or soft iron, but when soft iron is employed, bars of steel permanently magnetised will have to be used in conjunction with them) of a U form, and arranged around a circle with their poles pointing towards the centre. Each arm of each of the magnets has attached to it straight bars of steel, also rendered permanently magnetic (of which any desired number, and of any length or size, may be employed, according to the strength of magnet required), which are so placed as to be out of the influence of the armatures when the latter are revolving. The poles of the U-shaped magnets are, on the contrary, as nearly as possible in contact with the armatures which revolve within the circle formed by them, either between the poles or in front of them. Instead of the bars which form the circle being of steel and magnetised, they may be made of soft iron, and depend for their magnetism upon the magnetic bars before named placed around them. In another form of machine both the magnets and armatures are stationary, and the commutator alone has motion between the poles of the horse-shoe magnets and the armatures being mounted on a spindle and caused to revolve by a band from some driving machinery. The commutator or break-piece, is composed of a brass centre, with four radial arms of soft iron, either solid or formed of two or more plates.

CONSOLIDATED ANNUITY ENDOWMENT SOCIETY.—In the year 1829 the General Annuity Endowment Society was established, through the exertions of Lieut. George Walter, R.M., for the purpose of enabling persons whose incomes terminated with their lives to secure annuities to their survivors. This institution has now a capital of 250,000l., with 3000 insurers, and 400 widows and orphans receiving annuities, and has ceased to receive any further accession of members. The experience and successful results of this society have, therefore, suggested to Mr. Walter the desirability of extending its usefulness, by the formation of another institution under the above title. To the clergy, in particular, it is proposed to offer the benefits of the society on a highly liberal scale, the principal features of which are the securing annuities to surviving males to the age of 21, widows and female nominees while they remain unmarried, and the admission of females to subscribe and to nominate their children. To persons in trade, the society holds out peculiar inducements, as the annuity cannot be sold or lost under any contingency, so long as the rules of the society are observed. It appears, from the tables in the prospectus, that this society will secure to the nominees of its members an amount of annuity in proportion to the premiums, which no other institution can pretend to pay. This will be principally effected by adopting a plan introduced into the management of the Indian fund by the late Lord Clive, and also of a society established in Berlin a century ago—of suspending the annuities of female nominees during marriage, to be restored should they become widows, and thus by making the payment of the annuity contingent upon remaining single, as well as on survivorship, the society is enabled to effect considerably increased general benefit. Annuities may be secured for life to male idiots, or cripples, on payment of additional premiums. The tables and principles of this society strongly recommend themselves to the public; it numbers among its council many influential names in the clergy, with Lord Erskine as president, and will, doubtless, take up a prominent position among the institutions of the day for disseminating the blessings of life assurance. Mr. Walter has added to his present society a plan, by which a clergyman, aged 25, availing himself of the general views taken by the promoters of it, may, by payments of 12l. or 14l. per annum, secure a right for his widow and orphans, in case of his death, a comfortable house, and 100l. per annum, for the remainder of their lives.

HOW TO OBTAIN GOOD COFFEE.—Much has lately been said and written, and we fear, with too much truth, of the adulteration of coffee, and the difficulty of obtaining a good cup of this exhilarating, yet unobtrusive beverage. Our neighbours across the channel have long been famous for obtaining the pure aroma of this fragrant berry, and we see no reason why our English housewives and cooks should not be able to do the same. Having recently been invited to judge for ourselves of coffee, as prepared by the French Coffee and Chocolate Company, New Oxford Street, we have been somewhat initiated into the matter, and a finer cup of the extract we certainly never tasted. The great secret appears to be in the selection, and mixing of three or four sorts, no single species of berry being good by itself, and in the roasting; and from a coffee thus obtained any person may produce an extract equal to that so much boasted of in Paris. It should not be boiled, but boiling water filtered through the ground powder, when a rich claret-coloured extract is obtained, containing all the aroma, and a fragrance which cannot be secured by any other means. From the establishment above mentioned, families are supplied with the best coffee, whole or ground, and there is a refreshment-room where it may be had on the premises.

CREEVELEA IRON, COAL, COKE, AND PEAT-CHARCOAL COMPANY.

This property, extending over an area of upwards of 3000 acres, is situated in the heart of the well-known district of the Upper Shannon and Lough Allen: it abounds in iron ore, coal, and peat, and presents probably as fine a field for the profitable and legitimate employment of capital as is to be found in the Sister Island. The peculiar advantages which naturally attach to this property are the richness of the iron ore, its proximity to abundance of excellent fuel, a constant and enormous supply of water-power for working machinery, and the facilities of water carriage by the Shannon, now rendered navigable to the extent of 250 miles, passing through 100 counties, and communicating with the port of Sligo, thus opening up a free communication by the Atlantic with America, and by Dublin with the English markets. Mr. William Bedington, who has been lately employed to survey the estate, has forwarded the following independent report, founded on personal observation:—

Coal.—Upon examining the stratification, I found it necessary to sink a pit, for the purpose of ascertaining the thickness and quality of the coal under this property; I, therefore, selected a position, and I fully expect that in the course of a fortnight these points will be proved. Until this is done, I can only further add that the area of the coal-field is 500 acres, forming the crown of the hill, and bounded on the east by Killomane. In order to provide for any deficiency that may arise with regard to the coal under the Creevelea estate, I examined two coal openings on the Mountkenny Hill, and found the vein 18 in. thick, and of good quality for smelting purposes; I, therefore, advised the company to negotiate for the possession of this colliery, which can be obtained on very moderate terms. This coal can be delivered at the cupola for 5s. 6d. per ton.

Peat.—I have carefully examined the extent and quality of this fuel, and feel no hesitation in saying that no part of Ireland produces peat better qualified for smelting. With regard to quantity, there is an ample supply for upwards of 100 years. It will require a compressing machine to render it sufficiently dense to carry the burden of materials necessary in the smelting process. The patentees have been applied to, inquiring their terms. The peat is very conveniently situated, and will not cost more than 1s. 9d. per ton delivered at the cupola, or 10s. per ton converted into peat charcoal.

Ironstone.—After the most careful examination of every part of the property, I am gratified to be able to report most favourably of this mineral, both as to quality and quantity. The average per centage is superior to the best Welsh mines, and the quantity, comparatively speaking, inexhaustible. The different veins extend under most part of the estate, and are all above water level, rising slightly eastward; this obviates the expense of draining. The advantage of this position extends to the coal measures. The ironstone will cost 4s. per ton delivered at the cupola.

Limestone.—The quality of this material is suitable for smelting, and will cost 2s. 6d. per ton delivered at the cupola; this includes royalty. When proper roads are made this cost may be reduced 6d. per ton. The crop is near the north end of Belhaven Lake. **Site of the Works.**—Every care has been taken to select the most advantageous position for the cupola; and after a thorough examination of the different localities I decided upon the junction of the Gowlaun and Tullynamoye valleys as the most fitting and central situation. This position is very favourable, being nearly on a level and within a quarter mile of the principal ironstone beds, which will materially keep down the cost of conveyance. The cupola will be placed upon the Gowlaun property.

Water-Power.—I find that during five or six weeks in the year there is a deficiency of water. To meet this, it will be necessary to form a reservoir at the source or head of Gowlaun Valley, which can be done at a very moderate cost, as the formation or lay of the lode is peculiarly favourable. There is also at this point an immense collection of very superior peat, at least 15 feet thick, which upon removal will increase the reservoir to such an extent as fully to meet the regular supply necessary for a 30-horse power water-wheel. The expense of forming water-courses from the reservoir to the works will be avoided for most part of the distance, by making use of the beds of the Gowlaun and Tullynamoye brooks. The dimensions of the water-wheel would require to be 35 feet diameter and 8 ft. wide. The position selected admits of an overshot wheel of much greater diameter than this, if necessary.

The distance of the cupola from the north end of Lough Allen is not more than three miles and a half, a connection with which can be effected at a very trifling cost, there being a public road most part of the way; this would open a communication with all the districts bordering the Shannon, which, together with the quality of the iron, would place the company above competition. The expense of manufacture will diminish in proportion to the increase of the make of pig-iron.

The riches of the Lough Allen district are highly spoken of by Sir R. Kane in his *Industrial Resources of Ireland*, the eminent geologist Mr. Griffiths, Mr. Vignoles, and other competent men, whose professional duties have led them to visit these mineral districts. The coal is described as being bituminous, excellent for domestic purposes, free from sulphur, and for smelting iron the best in the empire. The clay iron ores of the Arigna Mountain (or Slieve Neeran) are too well known to need further detailing here; we may merely state that six samples, sent to Mr. John Mitchell for assay, produced from 41 to 50 per cent. of pure metal. Of the peat there is an inexhaustible supply of the very finest description; and, from the recent extensive improvements which have taken place in the production of peat charcoal, promises to form a profitable feature in this valuable property. Upon the whole, a finer extent of mineral land does not exist on which a large amount of labour may be secured to the population, which, by judicious management, may be rendered conducive to a handsome return for the capital invested.

CALLINGTON MINES COMPANY.

The quarterly general meeting of shareholders was held at the offices, Salvador-house, Bishopsgate-street, on Wednesday last, the 10th inst.,

PETER STAINSBY, Esq., in the chair,

After the usual preliminaries, the following report was read:—

The directors, agreeably to the rules, have called this meeting to submit the accounts for three months ending with the month of June last—a copy of which has been sent to each shareholder, and was published in the *Mining Journal* on the 30th inst. Two reports will also be read—one from Mr. Johnson, in which he expresses his expectation that the shaft at Kelly Bray will be communicated with the 70 ft. level about the middle of next month, when not only much copper ore will be stopped to advantage, but more ground on the copper lode will soon afterwards be made available; that the lead lode presents every indication of keeping up the samplings, until the mine is rendered more productive at Kelly Bray, as well as the lead lode itself, when the count-house shaft will have been communicated with the 125 ft. level, approaching it from the north and south shaft respectively. The works generally have been considerably extended; and Mr. Johnson bears testimony to their getting into more regular and extended operation; and when these two shafts are completed, no doubt larger returns will be made, and probably at less monthly cost than at present. The report of Capt. Lean, of a more recent date, is, upon the whole, confirmatory of that of Mr. Johnson. He states that the 135, which is the deepest level at present in the mine, is so satisfactory that he is anxious to sink the shaft to a deeper level—say to the 150; that when the 125 ft. level north and south are communicated with the count-house shaft, a large and valuable piece of ground will be available as tribute ground, from which the monthly samplings will be greatly augmented. At Kelly Bray there is every reason to expect that the ground will be down to the 70 ft. level in a month, when the ground driven already will be available for tributaries, and facility given for extending the 70 ft. level, more particularly into the granite.

The following report, from Capt. W. Lean, was then read:—

Callington Mines, Sept. 8.—The lode in the 135 ft. level, north and south of the diagonal shaft, is 20 in. wide, composed of quartz, prisms, and stones of lead, opening ground that will be wrought at a moderate tribute. As soon as possible we shall resume the sinking for another level, which is of importance, to lay open ground, and to have two or three levels at work at one and the same time. The lode in the 125, north of the north engine-shaft, is 18 in. wide, producing 3 cwt. of lead per fm., but is for the present suspended, and the men put to rise over the level for ventilation, &c.; the lode in the said rise will produce 4 cwt. of lead per fm.; the lode in the south end is 12 in. wide, composed of spar, white iron, and stones of lead, saving work; this end is being driven by six men as fast as possible, to unwater the counting-house shaft; the lode in the 125 ft. level, north from the south shaft, is 15 in. wide, producing saving work for lead; we have just got through the elvan course at this place, and are making on with all speed to reach the counting-house shaft, to make the ground available, and to increase our returns; the lode in the 125 south is 10 in. wide, producing 3 cwt. of lead per fathom—a very promising lode indeed, and is improving as we proceed in that direction. The lode in the 112 south will produce 6 cwt. of lead per fm.; the latter level is several fathoms in advance of the former, which circumstance looks kindly to have a productive piece of ground between these two levels. The lode in Kelly Bray rise over the 70 is 34 ft. wide, composed of spar, mullie, blende, and stones of copper ore; the ground is very much improved, and we hope to make a communication to the shaft within a month from the present time; the lode in the 105 ft. level, in the western end of the rise will produce 4 tons of copper ore per fm.; the eastern end of the rise is still unwrought, and will remain so until we have hold for want of air, and the removal of the wooden air-pipes. The lode in Kelly Bray shaft, sinking below the 50 ft. level, is in a disordered state, being split into branches, which are composed of spar, mullie, and spots of strong yellow copper ore; the shaft and rise are pushed on as fast as possible, and it is satisfactory to know that last month 4 fms. 4 ft. were explored "in both places;" and you may rely on our future exertions to lay the piece of ground open that is now remaining, in order to make a fair opportunity to work the ground, and to extend the 70 ft. level east into the granite, and to sink below that level, when this part of the mine is ventilated, and the kilble brought down to the 70, it will effect a great saving in the expense we are now obliged to go to by way of tramming, labour, &c. We shall sample a parcel of silver-lead ore on the 26th inst., computed 45 tons, and on the 26th inst. we hope to sample a parcel of copper ore, computed at about 50 tons.

Mr. H. S. HAMMOND observed that the continued workings for lead were entailing a very great monthly expenditure, and seemingly to little benefit; all was prospective, and a long time would elapse before any result could possibly be arrived at.

The CHAIRMAN explained that until the Count-house shaft was holed to the 125 ft. level south all the lead from that level that could be brought to market was merely that broken by the tutworkmen driving the end, which yielded 3 cwt. of ore per fm. As soon as the communication was effected there would be 80 fms. of good grey ground on both sides to beat away by tributaries. The shaft is down within 10 fathoms, but cannot be sunk at present on account of water; nor is it certain of being drained until the levels approach nearer to it; it may take four months to accomplish this. They would then have a back 15 fms. high to work away for above 150 fms. long; until then the expenditure would be much as for the last three months.

Mr. HAMMOND remarked that Mr. Johnson's estimate was, that 100l. per month would be about the average cost; the accounts now proved it to be 840l. loss for the quarter.

Mr. JOHN FIELD (one of the directors) said, that he had been led to calculate on larger returns of lead than the present sales, which left a deficiency of 840l., as stated by the preceding speaker.

The CHAIRMAN accounted for this by again showing that a considerable extra outlay was and would occur until the communication before alluded to, with the count-house shaft, was completed; only one-fifth part of the lead could possibly be returned; the remainder would hereafter be available

Original Correspondence.

PROPOSED ASSOCIATION OF MINING ADVENTURERS.

SIR,—It will be obvious to every one who has considered the subject, that a Mining Exchange can never be established on the system now on trial at the Hall of Commerce. A Mining Exchange, to be what its name imports, a place where all recognised mine shares can be at any time bought and sold at the current prices of the day, as stocks and railway shares are on the Stock Exchange, must be composed of members of two kinds—mine brokers and mine jobbers; the one having legitimate business to do for their clients, and the other, the jobbers, being always ready to purchase on having the turn of the market in their favour, and, consequently, to sell on the same terms. In this manner is the business of the Stock Exchange conducted. Two things, therefore, are essential to the establishment of a Mining Exchange. First, a recognised list of mine shares, in which the members will deal on the terms mentioned; and, in the next place, men of large capital as jobbers, ready to take mine shares as any other stock is taken. Until these desiderata are exhibited, I have not the slightest hope of the success of any scheme for developing a sound and permanent Mining Exchange. It would be, on my part, only a waste of time to adduce evidence of the utter inability of the present system to meet these requirements. If a Mining Exchange—that is, an association of dealers in mining shares—be deemed indispensable to the full development of this thriving and most important national interest, then the Stock Exchange alone can furnish the proper materials for its construction; and to this it must come at last. But, whether this result be realised or not, there is a very important, in fact the most important, class, whose interest has hitherto been overlooked in these preliminary arrangements, or which has only been made subservient to others, and that class should now unite for purposes of mutual defence and protection—I mean the mining adventurers, the holders of mining shares, between whom at present there seems no bond of union, although their interests are identical; and too often they become the prey of the dishonest and the ignorant. To protect mine adventurers, to facilitate mining enterprise, to obtain accurate and authenticated reports, to bring together the thousands of persons engaged and interested in this highly-important pursuit, I suggest the formation of an ASSOCIATION OF MINE ADVENTURERS; the only qualification being the possession of shares in a mine, and an annual payment of two guineas, subject to election, to prevent the admission of improper persons—share dealers, or persons employed by a dealer in shares, being ineligible as members. I submit these suggestions to your readers, and shall be most happy to aid in the formation of such a society: the secretary could materially benefit and assist distant members, and I believe such an association would be productive of incalculable benefit. It would not be in any manner antagonistic to the honest and fair-dealing brokers, who would be the agents of its members; but it would most assuredly, to the great advantage of mining and the community at large, purge that interest of the parasites which have adopted its nomenclature, and been mistaken for its legitimate offspring. A free intercourse between the members of the association would inevitably lead to the rubbing off and final extirpation of these gentry. The ass would be stripped of the lion's skin. Feeling assured that great good must result from such an association, I again repeat, I should be happy to be in any manner instrumental in its formation.

Communications on the subject may be addressed to me, at the office of the *Mining Journal*.—THOMAS HARVEY: London, Sept. 12, 1851.

THE MINING EXCHANGE.

SIR,—I had hoped that the formation of this institution would have more effectually protected adventurers than has hitherto been perceived, or sensibly felt. I am aware that it has not yet had time to mature itself so energetically and ably as its promoters would desire. At present, if shares are sold by private parties, a commission is required; the agents or brokers demand the same, and request the seller to execute blank transfers, so that he is ignorant in whose hands his shares may fall, or what price has been obtained for them. That it is necessary there should be brokers and dealers I admit; if acting in both capacities, they ought to be excluded from the Mining Exchange. To effect this the system of blank transfers should be abolished, and persons taking advantage of them forfeit their membership. Trusting the attention of the Committee of the Mining Exchange will be drawn to this important fact, I sign myself—A SUFFERER BY THE SYSTEM: Sept. 10.

MINING DIVIDENDS AND CALLS.

SIR,—The amount of dividends and calls for August are much the same in amount as for June—deducting Wicklow, which is for the half-year, August dividends would be 12,277 16s., against June 12,720 10s.; and calls 14,029 16s., against 14,615 6s. Now, although these calls exceed the amount of dividends, and mostly come out of the pockets of a different class of men to those who are the fortunate recipients of the dividends, it is by no means so awful a list as that for July, nor anything like the present month's amount threatens to be—the calls, amounting, as I observed in my letter of the 4th August, to no less an amount than 25,429 8s. in 32 mines, the greater part of which had not sold a ton of ore, many of them in debt to merchants who will doubtless have to put those shareholders who have not responded to former calls into the Vice-Warden's or County Courts for the recovery of their claims, as exemplified a fortnight ago by West United Hills, Tolcarne, and several other concerns in a similar predicament. I would here again call the attention of all parties interested in either of the 32 mines specified, who find they are in a similar dilemma, to give my letter of the 4th August an attentive perusal, and the calm consideration it is entitled to. It is written from wholly uninterested motives, meant to act as a warning signal to those who choose to see their way clearly henceforward, and having gone into the mire may not choose to wade through the mud and get out of their depth, but prudently turn back before it is too late to attempt doing so. "Sell and repent" is proved too frequently to be wholesome advice in commercial as well as every-day matters of business—in mining it is particularly so. From long experience I am enabled to state that one of the worst results in mining affairs is that of getting into debt; the next bad one is to allow defaulters' shares to stand any length of time unpaid without ample security; for if you do, the solvent man who regularly and cheerfully responds to his calls has soon to do so for his insolvent co-adventurers, and he at last finds it necessary to discontinue it, the amount getting serious, inconvenient, and hazardous. "Then comes the tug of war;" merchants are clamorous, and from experience they know the folly of prosecuting those who cannot pay, therefore carefully select out those who can; and thus the free payer, from want of a proper caution and vigilant inspection now and then into the accounts and affairs of the various concerns he has embarked in, finds himself suddenly involved to an amount 10 times beyond what he ever contemplated. In addition to the sad lesson he thus gets initiated in, that having not only paid up his own quota like a true, honest, and good adventurer, and also contributed towards the deficiencies of his co-partners who have not responded to the calls they were liable for, but that even worse consequences now threaten him by liabilities starting up where he never fancied any could arise; the merchants' bills being charged, the solvent shareholder dreams they are paid, and never wakes to ask whether they are so. The pursuer, of course, not having all the calls responded to cannot pay all the merchants; the consequence is they have to wait, and while funds are supplied to keep things quiet the mine goes on; but once falter and create suspicion that the tin is not forthcoming to pay the labourers and merchants, and then the grand explosion takes place. The workpeople, of course, have an easy remedy, they are first claimants upon the materials and effects upon the property; the merchants have to enquire "who can pay," and their attorney soon finds the way to make them. Now, I, at the present moment, know it for a fact that some half-a-dozen of these bolstered up "riggs," called mines, are in the exact state I here represent. They were set on to take in the credulous for the purpose of putting money in the promoters' pockets: all the parties had to do were to get some self-dubbed captains to write a flaming report, then get one of the London fraternity of "puffers" to visit the spot and write mysteriously as to "the congeniality of the substratum" and other conjecturing fallacies they have always ready at the end of their fingers and pen to supply a customer with, at so much per day travelling charges. The temptation is too great for the premium-bunter, he nibbles, bites, and is caught and landed as easy as a gudgeon, and I have already shown that he gets "cooked" shortly after.

The calls for August are from 23 mines, one of them on the very eve of "knocking," after incurring an expenditure of 141 16s. 8d. per 256th share—say, 3797 6s. 8d., and without finding ore to yield even 2 per cent. upon this outlay; notwithstanding which, in February last, when the calls only amounted to 21 10s., per share, they were selling wholesale in the market at 54 10s., a profit of 120 per cent.; in March 64 10s., or a profit of 155 per cent. The first seven on the list are, undoubtedly, worthy of the calls, particularly Wellington, which so recently paid dividends, and there is every probability of doing so again. The next six do not yield produce in proportion to the expectations formed prior to the outlay of so much money upon them—in fact, the sales in part of them are so insignificant that shareholders need be watchful in all of them, and out of the remaining 10 there are only three worthy of notice at present, one-half yielding no produce whatever. This, with arrears of calls, subject to forfeiture of shares and other liabilities, induces me from month to month to repeat my caution to shareholders generally; and if after reading your *Journal* they continue to maintain their apathy, and become willing sacrifices, they alone are to blame. Let them refer to that of Saturday last, and they will find that four mines record dividends amounting in the whole to 2704 1/2, while 14 make calls, 7457 10s., and this for one week only. Let them examine the published particulars of the latter: why, the whole bundle of them, the entire 14, are at this moment not yielding produce enough to pay the secretaries' salaries, the office rents, printing, and other paraphernalia thereto annexed. It is solely from my wish to see legitimate mining supported, and the honour-

able shareholder protected, that I am induced now and then to use my pen in this way. Mining, judiciously selected and honourably conducted, offers one of the safest and surest modes of investment; and it behoves all who can expose a chart showing the rocks and quicksands that lay in the roads to safety, to set up a lighthouse to guard the unwary. In my humble way I shall continue to attempt this.—ARGUS (of Truro): Sept. 9.

THE BRITISH MUTUAL GOLD MINING COMPANY.

SIR,—A letter, signed "K." (Loughborough), appeared in your last *Journal*, which, as it casts very unmerited aspersions on the board of the company that I represent, I am called to make some brief, though reluctant remarks. It appears that "K." imputes to the board of the British Mutual, or some of its members, the origination of certain articles which, from time to time, have found their way into the *Mining Journal*. Those articles he complains of as unfriendly attacks on the Anglo-Californian Company; and he winds up with a threat of recrimination, &c. Now, Sir, permit me to assure you, your correspondent, "K." and the public, that those mistaken allusions have caused every member of the British Mutual board much concern. There cannot exist, nor does there, any feeling but one of friendship towards the gentlemen now composing the Anglo-Californian board, nor any wish but for their success. There is ample scope for many companies, and for the energy and capital of much greater enterprises than 10 times what both companies can command in the wide and exhaustless gold-fields of California. As to the operations of any rival company, we have no means of knowing more than the public, or what the public press communicates; and we find, notwithstanding the astounding results of the mines, and the unprecedented quantities of bullion remitted from San Francisco, quite sufficient occupation in withstanding the unwillingness of the English people to confide so far in proven facts as to support the best founded scheme of practical adventure there.

We wish every company all the success they can desire; for the better they succeed, the better for us. As to the opposition of opinions in boards, perhaps no council ever concluded its office without more or less; but one thing is certain, that all parties, whether English or foreign, who have carried out any enterprise in California (and it is yet in an infant state) have been successful. England is the only country that has not acted in concert in these new fields of fortune, which, like the Nicaraguan universal highway, are left to American courage and address.

I trust that this avowal will clear the British Mutual Company of the unkind imputations complained of, and which I hope will be yet disavowed by their author. Great George-street, Westminster, Sept. 10. H. BAKER, Secretary.

SIR,—Being assured by the British Gold Mining Company that none of the unfair remarks which have at different times appeared in your *Journal*, relative to the Anglo-Californian Company, have in any way proceeded from persons connected with their institution, it is my wish to withdraw whatever that institution may consider of an offensive nature which is contained in my letter of the 2d inst. Loughborough, Sept. 11. K.

COOK'S KITCHEN MINE.

SIR,—From a report given at the account held at the above mine on the 20th August, respecting the loss for the past two months, and a reason for that loss, and an allusion again made to the same subject in your *Journal* of the 6th inst., I think, for the information of the adventurers of the mine, a few facts ought to be stated. It was said in the report that the loss was occasioned by the Dolcoath agents having taken a stream of water that had been running over Cook's Kitchen stamps. Well, be it so; the question is what quantity of water was taken, and for how long a time? Now, the stream will work one head only with a 15-ft. fall; if they have a 75-ft. fall it will work five heads, which will stamp out 20 tons of tinstuff in a week. If the water ran into Dolcoath for 10 days or a fortnight (say the latter), then the said water would beat out 40 tons of tinstuff. The average work in the mine is not more than 3 cwt. of black tin per 100 sds. the 10 tons, and I suppose they are just like others, who, when they raise more stuff than they can return, stamp the best first. I will call the stuff at surface at 2 cwt. of black tin per 100 sds.; that would give 8 cwt. of tin for the 40 tons of stuff, which would be stamped if Dolcoath agents had not taken the water. Now, 8 cwt. of black tin, at 50s. per cwt., amounts to 20l.; then, instead of losing 45l. 3s. 10d., the loss would be 415l. 3s. 10d. Now, this stuff can be stamped by steam-power for about 6d. per ton; and I would ask the agents whether it would not be better if the men were at their work, breaking tinstuff, than keeping guard, as they have been for the last fortnight, on a thing of so little importance to them? Is it not costing the mine 20l. per month?—A LOOKER-ON: Camborne, Sept. 10.

MINING IN CALSTOCK—WHEEL ZION.

SIR,—I am very sorry to observe, in your last *Journal*, a letter from Mr. R. P. Lemon, of Bath, in which he imputes wrong motives to "An Adventurer." I can assure Mr. Lemon that "An Adventurer" had no wish whatever to state anything but what was strictly within the bounds of truth; I went with him to Zion, and gave him all the information I could. As to the size of the sett, I think I ought to know it as well as Mr. Lemon. If Mr. Lemon says Wheel Zion is anything longer on the course of the great lode, on which they are now working, than East Wheel Zion, all I shall say is he makes a very great mistake. Mr. Lemon says Zion is six times the size of East Zion. I understand the East Zion to be the glebe land, which is over 60 acres; then, of course, Wheel Zion must be 360 acres. I am much pleased at this, as we have a larger sett than I thought we had. I am also pleased to find that the difference between Mr. H. Vivian and his brother is settled respecting the shares. I can assure Mr. Lemon that I wish well for Wheel Zion; I have an interest in the mine, and none in East Wheel Zion, but I am as anxious for the diffusion of truth as he can be. Mr. Lemon may be assured I should not be a shareholder if I did not think well of the mine. I have been offered a high price for my shares, but I believe not what they will make; in fact, I am not inclined to sell; but he must know that we here, in the neighbourhood, ought to know something of mines and setts as well as himself.—A SHAREHOLDER IN WHEEL ZION: Tivisick, Sept. 10.

SIR,—I observe in your *Journal* of Saturday last a letter from Mr. R. P. Lemon, in which he appears to be hurt respecting my notice of Wheel Zion. I beg to assure that gentleman I had no intention whatever to depreciate Wheel Zion in any way, but made my notes of that mine from a gentleman who is a shareholder, and one who has never yet deceived me. As to the size of the sett, Wheel Zion was pointed out on the course of the great lode, on which the ore is now raising, from a parish road on the east to a parish road on the west; and East Wheel Zion is supposed to run on the course of the same great lode from the eastern road to the River Tamar. The latter appeared to me to be quite as far as the former. I am very sorry to find by Mr. Lemon's letter that the lode appears to be getting smaller going east, as they are now just in the middle between the two roads before named. This does not look very well for the eastern part of the sett; but I have no doubt, in that fine channel of ground, it will open again. I believe Wheel Zion will turn out some thousands of tons of ore in the field east of the present workings; I mean in the field adjoining the eastern road, where the adit is. AN ADVENTURER. Liskeard, Sept. 8.

THE ASTURIAN MINING COMPANY.

SIR,—The enquiry of one of your correspondents in last week's *Journal*, as to the actual position of the Asturian Mining Company, induces me to believe that there are others, as well as myself, who would be thankful for some information on that matter. I am not a shareholder in my own right, but a considerable number of these shares, fully paid up, have fallen into my hands, together with other (and as I hope more valuable) assets, the property of an old friend of mine, lately deceased. Finding these shares nearly unsaleable, and having no acquaintance with any other persons who hold them, I have sought the advice of friends as to what steps I should take in such a difficulty, and the replies are very unsatisfactory and conflicting. Being informed that the property of the company is in a most critical and uncertain state, and that the venality of some (I hope of only a few) of the shareholders, and the incapacity and apathy of the greater number, have placed the entire control of their affairs in the hands of a very few self-appointed managers, in whom no very great confidence is reposed, I am assured that, in order to relieve myself from all responsibility, I should make my deceased friend's son, who is a minor, a ward in Chancery. Of course, before I take such a course, I must fortify myself with the best legal opinion I can obtain. In the meantime, perhaps, some of your correspondents who hold these shares, and in similar circumstances to mine, may have decided upon what steps they may eventually take; and I should feel very thankful if any of them would be so kind as to throw a little light on this (to me) very perplexing business.—TRUSTEE: London, Sept. 10.

SCRIP SHARES AND THE COST-BOOK SYSTEM.

SIR,—Being occasionally in the habit of laying out small sums of money in new promising mines, with a view to investment, among the numerous schemes which have got afloat within the past few months I have had placed in my hands a prospectus of the North Wheal Trelawny Silver-Lead and Copper Mine; and as there is a strange anomaly in the proposed mode of management, I request you will allow me space for a few remarks, which may perhaps elicit from the parties interested some explanation of a system which certainly I cannot exactly comprehend. The prospectus states that the mine is divided into 16,000 shares, of 10s. each, to be issued in scrip to bearer, and that the mine is now at work on the Cost-book Principle. Now, Sir, I have had some experience on the latter system as applied to mining management, and should much like to be informed in what manner these two principles resemble each other, and how they are to be applied simultaneously to the working of one adventure. The Cost-book Principle implies registration; the Stannary laws of Cornwall recognise no scrip companies. To carry out the system in all its integrity, it is absolutely necessary that every adventurer should be registered, that each holder may know with whom he is acting—the accounts be periodically settled, and the expenses, or the profits, fairly divided. If necessary to make a call under the least unfavourable circumstances, it is probable few of the holders of scrip would respond to it, and the registered holders alone would be called upon to make good all liabilities. If the promoters intend it to be really a scrip company, without any registration, it cannot be the Cost-book System, neither can it be partly scrip and partly registered shares. The mine may be worthy of a trial for aught I know; but why attempt to induce the public to take shares by calling the management "cost-book," which, under 7 and 8 Vic., cap. 110, exempts adventurers from any liabilities beyond the amount of their shares—when scrip is issued to anybody, which places the company out of the pale of the Stannary laws, and subject to the common law of partnership and joint-stock companies. To me, Mr. Editor, this double system looks at least suspicious, nor would I purchase a 10s. share in any mine until I saw the principle of management rendered clear and intelligible. METALLICUS. Lower Thames-street, Sept. 9.

by means of tributaries; the sales would then increase, with a reasonable expectation that the expenditure would be lessened.

Mr. BRADLEY looked more to Kelly Bray and the copper returns; they were progressing favourably, increasing the quantity of ore, and he expected it would one day be a first-rate copper mine.

The CHAIRMAN entertained a high opinion of its value and prospects. In a month's time the shaft was expected to be down to the 70, when double the quantity of copper ore might be extracted, and leave a good profit; this would be ascertained correctly against the next quarterly meeting.

Mr. FIELD could easily perceive they were now gradually arriving towards a period when the mine would be in a more effectual state of operations; they had overworked the lead portion of it five years ago, whereby it had got out of good working condition, and it took much time and expense to bring it round again.

The CHAIRMAN admitted the correctness of this observation; the north shaft ought at that period to have been set about. By the time the next meeting would be held, he anticipated the water would be drained, so as to resume sinking, and likewise be enabled more clearly to form a calculation of the probable results, both as to lead and copper: he would, therefore, propose that the reports and accounts now read be received, adopted, and entered on the company's cost and transfer books—which was carried unanimously.

Mr. JOHN FIELD proposed, that the thanks of the shareholders be presented to the chairman for his conduct in the chair, which being carried unanimously, and the chairman expressing his thanks, the meeting terminated.

ANGLO-CALIFORNIAN GOLD MINING COMPANY.

Pursuant to advertisement, a meeting of the shareholders in this company was held on Thursday, the 11th inst., at the Freemason's Tavern, Great Queen-street. Previous to the commencement of business, Mr. MASSEY DAWSON, one of the directors, observed, that as they (the directors) were met there to refute the allegations against them in Mr. Luke Williams's closely-printed pamphlet of 15 pages, it would be conceived to be more satisfactory to them, as well as to the directors, if one of their own body was elected as chairman, to control the proceedings of the meeting. After a desultory conversation,

Mr. HINCKS, of Birmingham, was unanimously voted to the chair. The CHAIRMAN then read the notice convening the meeting, and stated it was with great diffidence he undertook the position in which they had been pleased to place him. Mr. Williams's pamphlet was in their hands, as well as that of his opponents; he would beg them to view the case calmly and dispassionately, and keep to the objects of the meeting, and abstain, as far as possible, from all extraneous matter.

Mr. MASSEY DAWSON said that the directors courted inquiry. Since he and his friends had joined in June, 1850, there was no transaction that they wished to be kept secret, or from the knowledge of the shareholders: their conduct had been all fair and above-board. They wished a complete registration of the company; and the reason why no public meeting had been called was this—that while there was no perfect registration the company was not formed, and they were solely liable. They had advertised in the papers; they had sent a notice to Mr. Williams that they intended to be here; if he knew himself innocent, why did he not come forward? This was no hole-and-corner meeting; what they said here would go forward to the world, not through their instrumentality, but that of the gentlemen of the London press, several of whom he saw in the room. Mr. Luke Williams had been the first promoter of the company; they had joined, having no suspicion of his character; they had heard about Palmer, but this had not daunted them; they imagined the company was *bona fide*, and, therefore, had taken the large stake they now held. For some time Mr. Luke Williams had opposed the registration; all at once he seemed inclined to further it. This aroused his suspicions; and, on going home, he had observed to his friend, Mr. Cottrell, that he thought it was some "dodge." They had urged on Mr. Williams the necessity of getting the deed signed; he had to go to Southampton, Poole, Weymouth, Brighton, and Penrith: he made some objections, stating that he was always out of town, had to leave his family, and was put to great inconveniences, they only allowing him a guinea a day besides his expenses: to meet his views, they agreed to give him two guineas. Mr. Williams had entered the office, and taken away books and documents of the company. He managed in the deed to get his name inserted as their managing director, which could not have been altered unless they had discovered it previously. Through Sir Cavendish Rumbold, he had made certain propositions to them. One of these was that, on payment of a certain sum, he undertook to obtain necessary signatures to the deed within seven weeks; another, that if he retired he should receive the sum of 500l. as promoter of the company. The directors, if they went out, were to receive 500l. each from him. He would now read a letter which they had received from Mr. Williams, as follows:—

"TO THE DIRECTORS OF THE ANGLO-CALIFORNIAN COMPANY.
"Southampton, 16th June, 1851.
"DEAR SIRS,—Previous to my departure, the mail brought a letter from Mr. Marrett, which informs us that our men at the mines, except two, had gone away to work for themselves. I have come to the conclusion that it will be better to keep this matter quiet until we get Sir H. Rumbold's despatches. I fear the result will be our company will smash. * I think we had better organise a small party of Londoners; and, without saying a word about what has happened, give out that we are adding to those already settled in California, or rather sending out a third expedition of miners. This, well advertised in London, would be powerful in aiding us to augment the finances, and blind some of the cunning people as to the real state of affairs."

He would ask them what confidence they could have in a person who had acted in this manner? Sir Cavendish Rumbold, their colleague, was absent on account of illness. Why did not Mr. Williams appear when he had declared the directors were afraid to meet the scrip-holders? The real question they had to consider was the signing of the deed. The object of the meeting was to have the consent of the shareholders to their signature of a second deed. The provisional directors could not enforce signatures; but it was their duty to submit it to the shareholders.

Mr. SHOTTON, from Lincoln, expressed his satisfaction, and that of all parties in his district who had signed the deed. The statement made by Mr. Dawson, in his opinion, was to the point.

The CHAIRMAN stated that at Birmingham a general feeling was in favour with the directors; 91 out of 93 had signed the deed. This was previous to the circulation of Luke Williams's pamphlet; they had since then increased their stake. He recommended parties to sign the deed, and having examined the accounts, to rescind the concern. The mode of doing business in Birmingham, was to pay down or cut.

Mr. COTTRELL: The present liabilities are only the solicitor's bill for the deed—that owing to the late solicitor did not amount to 500l. Their present solicitor's bill was not 1000l., but this would not be demanded unless they had funds to pay it. Although dividends had been promised they could have none, until they were completely registered.

A SHAREHOLDER inquired the extent of the sett which they had in California.

Mr. COTTRELL should decline answering this question.

Mr. DAWSON considered that caution should be observed at this present moment, as Mr. Luke Williams might have his agents present; or there, perhaps, were parties who were connected with a rival company. Those who were fearful of signing the deed he would counsel to take legal advice.

A SHAREHOLDER stated he appeared on behalf of a lady who had taken shares to a considerable amount at 10s., and others had only paid 6d.

Mr. DAWSON could not now answer this question; what had been done previous to their entering the direction he was not cognisant of.

A SHAREHOLDER observed that Mr. Williams at present was out of town, and probably for that reason had not attended the meeting. (Oh, oh!)

Another SHAREHOLDER inquired if there was any liability beyond the 10s. per share?—The CHAIRMAN: Decidedly not.

A SHAREHOLDER stated he came from the north: he was gratified from the proceedings of to-day, and pleased with the lucid explanation of the directors as expounded by Mr. Dawson. The feeling of hostility in his district on its return home would be much abated. He should, however, wish that the directors would send an abstract of the deed round to every shareholder.

Mr. COTTRELL said this would be a great expense. There were 2200 shareholders dispersed in several parts of the kingdom. The deed was about 400 folios in length. They had the advice of some of the most eminent counsel on its merits and legality.

After this, a desultory conversation ensued. Several resolutions were passed, which appear in our advertising columns, and the meeting separated.

LEE MOOR PORCELAIN CLAY COMPANY.

In the *Mining Journal* of last week we referred to the formation of this company, and we are glad to hear that a disposition is evinced by capitalists to investigate the merits of the fine property which has come into the company's possession, and which on inspection will, we have no doubt, be duly appreciated. Professor Ansted estimates that the whole of the valley, in which excavations for china-clay have been hitherto carried on, is composed of the same material as that already laid open; this has been rendered tolerably certain by numerous trial pits, some of them to a depth of many fathoms; and instead of there being any chance of the clay changing as the work advances, he expects the proportion of the finest kind would increase in the lower part of the deposit. There may be considered at least 1,000,000 tons of decomposed granite in each 10 acres of surface 10 yards deep; of which, two-fifths, or 400,000 tons, are available china-clay; and as the total average is many times that assumed as a standard, and the depth, generally, three or four times as great, the whole available supply may be considered inexhaustible.

China-clay, or kaolin, is a compound generally of silica (sp.) 63, alumina 20, lime 6, potash 13, and oxide of iron 1 = 100. It is known by the mineralogist as felspar, obtained from the decomposition of granite by atmospheric influences, and is one of the most abundant minerals in nature, forming fully two-thirds of the masses of granite and gneiss, two of the most widely distributed and oldest of the rocks, and in porphyritic granites it appears in fine large granular concretions. It is not confined to the primitive rocks, but occurs abundantly in transition mountains, and in sandstones, greenstones, clinkstones, porphyry, and basalt. The late Richard Phillips, Esq., of the Museum of Economic Geology, found the Morley felspar to differ in analysis from that given above, and much more fit for the potter's use. He found one sample to give only silica 45.90, alumina 53, magnesia .71, water .99 = 100; and another silica 50.65, alumina 48.85, magnesia 0.87, loss 0.13, being free from an alkali, and presented only a trace of iron. Fire-bricks may be made from this clay in its natural state without washing, which stand a greater heat than the famed Stourbridge bricks in the black bottle glass furnaces.

THAMES TUNNEL COMPANY.

Number of passengers who passed through the Tunnel in the week ending Sept. 6 was 43,994.—Amount of money, £193 6s. 2d.

BRONFLOYD LEAD MINE, CARDIGANSHIRE.

Sir,—With reference to the prices quoted in your Share List, I find this mine amongst the number at 12s. as the last selling price; I, therefore, think it due to the public to say that in a future Journal I may think it necessary to enter into an explanation of the exact position of the company; but, in the meantime, parties who accept transfers, without due caution, must, of course, take the consequences, and, perhaps, the risk that has already attached to—
Aberystwith, Sept. 8. AN ORIGINAL AND BONA FIDE SHAREHOLDER.

WHEAL REETH—MERCHANTS' BILLS.

Sir,—Through the medium of your columns, I wish to call the attention of the shareholders of Wheal Reeth to the accounts of that mine, dated the 25th of August. The receipts (less dues) amounted to £6077. 2s., while the three months' cost was £2911. 11s. 6d. In addition to this large sum, there is a charge of £686. 4s. 8d. for "merchants' bills," of which sum I think it would be satisfactory if some particulars were given, as it is more than equal to the amount of the dividend. Although I am a shareholder in several other mines, I find in the accounts of none of them so large an outlay under this head; and as I have no notion of what it is composed, I shall be much obliged if this letter should elicit an explanation.—A SHAREHOLDER IN SEVERAL MINES: Sept. 10.

WHEAL CARPENTER.

Sir,—Appreciating your desire to give correct quotations of the prices of shares, and observing, in your last week's Journal, the present price of Wheal Carpenter shares stated at 21s. to 22s. 10s., I beg to inform you that such a quotation must be merely a nominal one, for the only transfer of shares that has passed through my hands, as purser, for the last ten days, is one of five shares, the price paid for which I know to have been 42s. 6d. per share, before the call of 11s. per share, made yesterday.
Christophers Bridgman,
Tavistock, Sept. 10. Purser of Wheal Carpenter, in the Tavistock district.

[Notwithstanding the above, several brokers have now for sale shares in the mine at 45s. to 50s. each, as again quoted by them in our list.]

Mining Correspondence.

BRITISH MINES.

ALFRED CONSOLS.—The lode in the 90 fm. level, driving east of Field's engine-shaft, is from 10 to 12 ft. wide; at present we are driving on the north part, and hope shortly to drain the winze that has been commenced sinking under the 80 fm. level. No change in the 90 fm. level since the last report. The lode in the 80 fm. level, east of this shaft, is worth for copper ore 80s. per fm. The lode in the boundary winze, sinking under the 70 fm. level, is from 9 to 10 ft. wide, worth for copper ore 170s. per fm.; this winze is 3 fms. east of the 90 fm. level end, which looks very cheering for the 80 fm. level. No change in the 60 fm. level, west of the engine-shaft, or in any other part of these mines, since the last report.

APPLEDORE.—The engine continues to work well, and the ground in the shaft is of a most favourable character. We have set the shaft to sink by nine men, to complete to 20 fms. deep, at 10s. per fm., the contractor to provide all materials, except timber, and also to pay for horse hire incurred in drawing stuff, &c. We hope to reach the 20 fm. level in about six weeks.

BEDFORD UNITED.—In the 103 fm. level, east of engine-shaft, we have been driving by the side of the lode, and have not taken down east of cross-course; in the same level, east of Andrew's winze, the lode is 2½ ft. wide, composed of spar, mndie, and copper ore, yielding saving work; the end west of winze is extending by the side of the lode, which has not been cut into for the past month; in the 103 east the lode is 4 ft. wide, with a good leader of ore, producing 4 tons of ore per fm.; the lode in Lintern's winze in the bottom of this level, is 3 feet wide, and worth from 10 to 12 tons of ore per fm. In the 90 fm. level the lode in the end is 2 feet wide, producing saving work; in Bunde's winze, sinking in the bottom of this level, the lode is upwards of 3 feet wide, worth 6 tons of good ore per fm., and likely to become more productive; this winze is 5 fms. before the 103 end; the improvement in the lode is, therefore, important, and greatly increases our prospects. In the 80 fm. level we are still driving by the side of the lode; the capels, which have continued to be large and hard up to the present time, appear to be getting smaller, and wearing out. The Tavistock lode, in the 47, west of cross-cut, is about 16 inches wide, composed of mndie and spar, with spots of ore occasionally. The pitches are looking as well as usual; and we can confidently rely on keeping up the present returns.

BOLENOWE.—This week we have holed the engine-shaft to the adit, and are now cutting down and completing it to the bottom of the level. All our operations are proceeding with vigour.

BOSORN.—Our engine works exceedingly well; we have attached the flat-rods this day to draw the water from the eastern shaft, and expect we shall see the bottom of the latter part of next week. The shaftmen in clearing up the engine-shaft under the deep adit level have got to the bottom, which we find to be 11 fms. under the level, and there is no end driven either east or west from the shaft, which we like very well, because we have now 11 fms. of high backs, and after we have driven a few fms. each way we shall be in a position to set these backs on tribute. There is a very kindly lode of tin in each end, from 12 to 18 in. wide, containing tin throughout. We have had two tributaries working in the back of the adit level for a few days past, and they broke some tin stuff as left by the old men, 1½ sacks of 14 gals. each, worth 2s. per sack, or 4 cwt. of black tin per 100 sacks; and 1½ sack worth 20s. per sack, or 40 cwt. of black tin per 100 sacks.

BRYN-ARIAN.—The engine-shaft is cleared up to the bottom, and we shall commence sinking about the 10th inst. The lode in the 20 fm. level, west of Hughes's winze, is 6 ft. wide, yielding 10 cwt. of ore per fm.; the lode in the back of this level, west of Hughes's winze, is from 15 to 16 ft. wide, yielding a ton of ore per cubic fathom. The lode in the back of the 10 fm. level, west of the shaft, is yielding about 8 cwt. per fm. We have commenced sinking Hallett's shaft under the 20 fm. level; the lode in this level, driving north, is becoming more disordered within the last 3 or 4 days, and although its appearances are very encouraging, it will not yield at present more than 12 or 15 cwt. of ore per fm.

CEFN BRUNO.—The water is in fork, and the men have commenced to sink the shaft. The lode is 3 feet wide, yielding 2½ tons of ore per fm. The lode in the 24 west is 2 ft. wide, yielding 1 ton of ore per fm., and looking very promising. The lode in the adit level is 2 ft. wide, producing good stones of ore; and in the same level, east of the cross cut, it is 4 ft. wide, spotted throughout with ore. The lode in the shaft, sinking from surface, west of engine-shaft, is 20 in. wide, containing small branches of ore.

CEFN CAM SLATE QUARRY.—We have set bargains to raise the slates by the thousand; also to drive the open cut to its end by the square yard. A section of the above I shall send by the end of this month.

CHYPRASE CONSOLS.—During the last fortnight, since the engine has been at work, we have sunk and cased the shaft 3 fms. below the 18 fm. level. Should the ground continue equally favourable as it is at present, there is every reason to expect that we shall reach the 40 fm. level, where we intend to drive on Wheal Bassett copper lode and Old Chyprase tin lode, by the expiration of the four months from our resuming sinking in the shaft. We have also roofed in the boiler-house, and cased with timber the cylinder and steam pipes, and in a few days the carpenters will have completed their work in the engine-house. The engine performs its duty well.

COPPER BOTTOM.—Since my last report a cross-cut has been driven south at the bottom of the engine-shaft, and the lode has been cut; but as we have not yet driven through it, I am unable to say what it is composed of, in my next report I shall be able to give the particulars concerning it. The men in the 30 fm. level, west of Paul's shaft, are rising against the winze sunk in bottom of the 20 fm. level, in order to drain it; in the rise in back of 20 fm. level, west of Paul's shaft, the lode is 3 ft. wide, still producing some good work. At the north lode we have six men cutting ground for the dams, which we intend putting in west of flat-rods shaft, for the purpose of keeping back the water which is at present issuing from the cross-course, east of the above shaft; we have suspended the 30 fm. level, west of May's shaft, until the shaft is cut down from the 10 to the 20 fm. level, which will be in 10 or 12 days; the lode in the end, at the time it was suspended, was 3 ft. wide, yielding some fine stones of rich yellow ore; the lode in the 30 fm. level, driving west of Gendall's shaft, is at present disordered by a slide; we are cutting down May's shaft, from the adit to 10 fm. level; at surface the barrow at May's shaft is being cut through; we are also removing a piece of ground for the angle-bob; and all the other work is being done as fast as possible, preparatory to removing the flat-rods and pitwork.—P.S. In reference to our prospects, I believe we need not look forward to anything new for a few weeks to come, as we have commenced operations for the removal of the pitwork and rods from the north engine-shaft, as directed at the last meeting; during the time this is in hand the usual work of the mine cannot be carried on. We have decided on the best thing that possibly could be done for the mine, and after the present month we shall considerably reduce our expenditure; should the western ground turn out as all parties here anticipate it, we shall be well remunerated for all our outlay.

CWM ERFIN.—The 45, or bottom level east, still looks very well, yielding from 14 to 18 cwt. of ore per fm.; the west end is improving, lode bearing good stones of lead and copper ore. The 30 east is producing good stones of ore, and more promising than for many fms. back. The cross-cut in the 10, or Roberts's winze, is holed to the north branch of the lode, which will yield 10 cwt. of ore per fm. The cross-cut north of the old engine-shaft, in the 10 fm. level, has intersected two branches of ore, and it is expected that the north lode will be found farther north. Preparations are making to sink to winze-shaft.

CYFANEDD FAUR.—We are putting down our top winze in No. 2 stopes, and also making dams in both ends to raise the water up to the level, to commence sinking on the ore. The ore I have sent to be dressed by the ton. I expect that our washing baddies will be placed by the end of next week.

DEVON AND COURTENAY.—We are getting on excellently with fixing the flat-rods, &c., and I see nothing to prevent our putting the wheel to work on the 19th inst. The sumpmen are getting on well with the sinking of the shaft; the ground is favourable. Curlew's sump shaft is in a good clean country, but the water has increased within the last few days. The tribute department is improved since my last, and the tributaries are working well.

DURODE.—The new shaft is being sunk rapidly; the ground is open and favourable; they are now more than 44 fathoms deep, and the lode exhibits flookan, soft elvan, decomposed spar, mndie, and ribs or veins of bright yellow ore; it is gradually improving in depth, and promises deposits of rich ore. In the drivings in the end of the 10 fm. level we are getting on well; the stones brought up are mixed with good yellow ore. In the other new shaft the ground continues of the same rich character, mixed with native copper; the lode improves in depth, and the ground easy to work.

DOLFRYNOG.—We have finished clearing to commence the sinking of our new shaft, which will take place to-morrow (Sept. 10); it is to be called Williams's shaft. At the malchite, I am daily expecting to cut the lode; to be called Harvey's shaft.

EAST BALLESWIDEN.—We are now about to extend the 10 fm. level west on the Rose lode by four men in tin ground. We are sinking the flat rod shaft by eight men and four boys; this shaft is nearly 3 fms. under the adit level. On the new lode we have a good course of tin in the bottom of the adit for 3 fms. long, and a good lode in the end. We now want to get our stamps to work.

EAST CROWDALE.—Nothing has been taken down from the south lode in the 58; the strata still hold good, and lode holding fast towards the north lode. North, a little improved for copper, but very much corrupted with mndie. The winze in the back is producing good stones of ore.

EAST DAREN.—The late showers have enabled the men to get into the 10 fm. level, which was holed through to Taylor's shaft, and it is fixed that it will be put in operation on Saturday next. About 2½ miles of the new lode are completed; there is about a mile more to finish, which will be done as quickly as possible.

EAST GUNNIS LAKE.—In sinking the engine-shaft the ground continues hard, lode maintaining its size and promising appearance, and at the deepest point yielding good work. In the south shaft the lode is 2 ft. wide, mndie, spar, and ore, saving work. In the 10 east the south lode is 2½ ft. wide, producing good stones of ore, and a very promising appearance. The river shaft has been cleared down to the 16 fm. level, and the men continue the work. We hope to reach the 24 within six weeks—until this is completed we cannot do anything more towards clearing the 24 from engine-shaft. There are about 15 tons of ore broken, which I purpose sampling in a week or ten days.

EAST SHARP TOR.—The lode in the cross-cut in the 40 fm. level, east of Hitchen's shaft, so far as cut into (1 ft. 6 in.) is rather hard, being composed of dark capels, quartz, peach, compact spar, and oxide of iron. The shaftmen have completed the barrow road, and are now engaged driving by the side of the lode west of shaft. We purpose extending this level 30 fms. in this direction, ere we cross-cut the lode; the present price is 4s. 10s. per fm. for 2 fms.

EAST WHEAL GEORGE.—The lode in the 23, east of engine-shaft, is 2 ft. wide, composed of capel, spar, mndie, and spots of ore; west, it is poor at present, composed of peach and flookan. The lode in the stopes in the bottom of the 12 is 3 ft. wide, a good ore lode. We sampled, on the 6th inst., August ore, 14 tons 20s. cwt.

EAST WHEAL LEISURE.—The cross-cut south of Jewell's shaft will intersect the lode in a few days. The lode in the 27 east is producing about ½ ton per fm. In the 17 west the lode is large, and producing from ½ to ¾ ton per fm. In the 10 fm. level west, on Taylor's lode, the lode looks promising, yielding 1½ ton per fm. In a winze sinking from the adit east of Taylor's shaft, there is a very promising lode, 6 ft. wide, composed of soft priam, mndie, and a little ore. The tribute pitches are looking well, and 100 tons of ore are expected to be sampled very shortly.

EAST WHEAL RASHLEIGH.—We have a very strong lode in the end: it is making its course due north, is 4 feet wide, and underlays 2 or 3 inches in a fathom—in character it is much the same as last reported, but more impregnated with mndie, flookan, and priam—driving for 3½ tons per fm. An assay of the lode, taken from the shaft 6½ fms. deep, produced 39 percent. for lead and 21 ozs. of silver to the ton—value about 6s. per ton.

EAST WHEAL REETH.—The 24 fm. level is going forward satisfactorily; the ground being good for driving, and indications for tin fair. Two months' more driving will no doubt bring us to the Wheal Reeth lode, where I believe our expectations will be more than realised. We are doing our best to facilitate the workings, and I have only to add that the East Wheal Reeth set, if properly worked, will be second to no mine in this county, for I have been uncommonly pleased to hear from the neighbours that no champion lode has been known to fail in this locality; and I am convinced from my own observation of the truth of this statement. The engine works well and steadily.

EAST WHEAL RUSSELL.—Since my last report, our lode in the tunnel level is greatly improved, being now about 3 ft. wide—a good ore lode—which continues to improve as we drive west towards the cross-course. I have had an assay made of some of the best of the ore, and find it to contain 30 per cent. of copper. The engine has not yet arrived, which is causing considerable delay in the prosecution of our mine.

FRONGOCH.—The 66 fm. level from Pryse's shaft is worth ½ ton per fm.—the best part of the lode is supposed to be in advance; in the same level west the lode is 4 ft. wide, all of which will pay well for taking away. In the 56 fm. level, east from Taylor's shaft, the lode is 4 ft. wide, 2 ft. of which is saving work. In the 44 fm. level east the lode is 4½ ft. wide, worth 2½ tons per fathom; in the winze sinking under this level the lode is worth full 2 tons per fm. In the 34 fathom level east the lode is worth 1 ton per fathom.

GOGINAN.—The lode in the 120 fm. level, west of Francis's shaft, is 5 ft. wide, composed of spar, blende, and clay-slate, with small branches of ore. The lode in Taylor's shaft, sinking below the 130, is large, looking promising, and yielding 18 cwt. of ore per fm. The lode in the 90 fm. level, west of Francis's shaft, is 4 ft. wide, with small spots of ore. The lode in the shaft at the boundary below the 30 fm. level is large and ore.

GRAIGOCH.—The 10 fathom level, east of engine-shaft, is from 1½ to 2 ft. wide, worth 1 ton per fm., looking promising. The mines are in want of surface water.

GREAT BRYN CONSOLS.—We have got through the large lode in the deep adit; this lode is from 6 to 7 ft. high; a very strong lode; and, no doubt, in depth it will shortly make abundance of copper. We have now, in the end, the most beautiful ground I ever saw; I have let it at 18s. per fm. for one month; we are also driving close in the shallow adit ground, very good, set at 9s. per fm. stent. I expect the walls of the count-house and smith's shop will be up next week to take the roof; we are getting on well with the trial shaft on north lode, and hope to cut some copper this week.

GREAT WHEAL BADDERN.—The lode in the 51, east of Tweedale's shaft, is from 10 to 12 in. wide, entering a great deal of water. The stopes in the back are exhausted, and we are stopping the adit, and east of Kenworthy's shaft, which point is producing moderately. In the 40, east of Buckley's, and near Burgan's shaft, the lode is 6 in. wide, almost solid lead; this is a point we must continue to push with all speed, to get under Burgan's, in order to communicate, or complete, that shaft to this level. The stopes in the back, east of Buckley's and west of Tweedale's, are rather better than usual. The 30 end is without improvement. The stopes are turning out very satisfactorily, and ground good for opening. The 20 end, on the old lode, is still suspended; ditto on new lode, is still going west towards the cross-cut; the end contains an excellent lode of lead. We have cut the new lode in the cross-cut, and opened upon it west of cross-cut a few feet; the lode is 2½ ft. wide, of a most promising character, in beautiful floor ground, but not rich for lead; we shall now extend rapidly east and west on its course, and trust it will produce us much lead. The stopes east and west of Burgan's are good. The tin pitch, west of Sunderland's, in the 20 fm. level, continues to produce good work. The adit is driving slowly, lode poor. The winze on the counter lode does not present very encouraging appearances. The surface operations and dressing are going forward as usual. The mine is looking well, and promises to be second to none in the county, if properly carried out. The chances of discovery are good and many.

HEIGNSTON DOWN CONSOLS.—In my last two-monthly report I advised of having sunk and made complete Doldge's winze 10 fms. 3 feet below the 45 fm. level, or to a 55 fm. level; since which we have cross-cut the lode at that point, and have cut in an easterly and westerly direction altogether 5 fms. 3 ft., and have great pleasure in being able to inform you that the new lode is very rich, and on an average 6 tons of ore per fm.; the lode at present, east of said winze, will produce about 8 tons of good quality ore per fm., and in the western end the lode is 10 feet wide, and worth about 6 tons of ore per fm. We set on the 30th Aug. the eastern end to drive at a tribute of 4s. in 12. The 45 fm. level has been driven since the last meeting 4 fms. 2 ft. 9 in. through a large, but unproductive lode; this end is suspended for the present, and the men put to rise towards Eastman's winze, sinking below the 35 fm. level; and I hope a communication will be effected by the end of the present month, as it will considerably assist in the ventilation of the mine. In the 35 fm. level is also suspended, as at your last meeting, in the level this lode of ground has been stopped, yielding on an average 14 tons of ore per fm. On the south lode, east of the cross cut, 4 fms. 3 feet have been driven; and I am glad to say, it is holed to the end, driving west from Hitchen's shaft; there is now a good current of air, by which the men are much benefited. Hitchen's shaft has been sunk 2 fms. 2 ft., and is now 10 fms. 3 ft. below the 35; we have, therefore, set a level to drive east from that point, for a trial of the lode, where it is producing some good stones of ore, and is at present worth 1 ton of ore per fathom. Bailey's shaft, sinking below the 45 fm. level, is down 2 fms., and I have great hopes of meeting the lode in the 45, and west of Doldge's. Victor's winze, sinking in the bottom of the 45, and west of Doldge's, is progressing satisfactorily, being 6 fms. 1 ft. deep, with ground favourable for sinking; this will be our sump-winze, and will materially assist us in proving the ore ground longitudinally and in depth. We have at the quay and at surface, dressed and undressed, from 45 to 50 tons of ore. The grinder is in course of erection, and everything going forward satisfactorily; and should the lode in the 55 fm. level continue as at present, 80 tons of ore may be calculated on as being ready for sale by the end of September. Our costs are necessarily increased by the work at present going on, but in a month or so more I hope to be able to reduce them. I beg to congratulate you on the possession of one of the most promising mines in the county.

HERODFOOT.—The 117 fm. level is much improved, the lode in the end being worth 20 cwt. of ore per fm., and tolerably easy for driving, so that we are laying open profitable ground. The 82 continues to be comparatively poor, and the fall off in the east is entirely owing to it. The 72 is improving, and bids fair to become as productive as before. The 62 is also looking much better; the lode in the end is now worth 10 cwt. of ore per fm., and occasionally, during the past month, it has produced at the rate of 20 cwt. per fm. In the 106 the lode continues to be small and poor, but we may expect a change shortly, as the end is nearly under the point where the lode began to be productive in the 94. On the whole, the mine is looking better than for some time past, and there is a fair prospect of getting back to our former returns. We sampled 55 tons of ore on Saturday last.

HOLMBUSH.—The ground in Hitchen's and Wall's engine-shafts is favourable, and good progress making in both. The lode in the 132 fm. level south is 10 ft. wide, producing 5 cwt. of lead per fm. The lode in the stopes in the back of the 132 is 18 in. wide, producing 3 tons of copper ore per fm. The stopes in the bottom of the level for the present suspended. The lode in the 132 fm. level, east of the diagonal shaft, on the north part, will produce 14 tons of copper ore per fm. We are still pursuing the rise over this level, and the winze below the 120, on the lead lode, to make the communication. The flap-jack lode in the 120 fm. level, east of the cross-course, is 20 in. wide, composed of spar, blende, blende, and stones of copper ore. The lode in the 100, on the same lode, is 15 in. wide, producing 2 tons of ore per fm. The lode in the 100 east is 2 ft. wide, producing 1 ton of ore per fm., and promising further improvement. The lode in the 100 fm. level, west of Wall's shaft, is 3½ ft. wide, composed of mndie and stones of copper ore. The tribute pitch in the bottom of the 110, on the flap-jack lode, is set to six men, at 3s. in 12.

KENMARE.—The following is an extract from the report of Captains W. Thomas and H. D. Croker, dated Sept. 3:—At Campbell's shaft the vein of rich ore is increasing in size or thickness, and the north wall of the lode is very regular and well-defined; I think it will produce from 10s. to 12s. worth of ore per fm., and the cost of sinking is 6s. per fm. In the 36 and 27 fm. level ends, west of Croker's shaft, the lode is not producing any ore worth mentioning. In the rise in the back of the 36 fm. level, east of Croker's shaft, the ore will be a little more than pay the cost of working; the stopes also in the side of the 36 fm. level will leave a small profit over the cost of working, as well as the stopes east of Lamb's winze, which has been communicated from the 17 to 27 fm. level. In Manby's shaft (the lode being still irregular and undefined, and shifted to the south) we have thought it best to cross-cut south 6 feet, in order to ascertain its real size or breadth; it is composed of mndie, small particles of galena, and sulphate of barytes. The castings are all on the mine—new capstan, rope, whim-chain, mill's belt, &c. all of which appear to be of good quality. We are now busily engaged in making the necessary alterations in the shaftwork, preparatory to sinking Croker's shaft and opening new ground. We are doing all that is possible to be done to forward the work and develop the resources of the mine, and also gleaming up a small quantity of ore of good quality.

KESWICK.—The lode in the 20 fm. level north, at Brandley, is worth full 30 cwt. of ore per fm.; No. 2 rise, in this level, is worth 25 cwt., and Lynn's rise 8 cwt. of ore per fm. In the 20 fm. level we have good ground, with a little saving work. At the engine-shaft, six men are cross-cutting to the lode. The salt sump is yielding full 30 cwt. to the fm. At Thornthwaite, the 37 fm. level is easier for driving.

KIRKCUDBRIGHTSHIRE.—The lode in the 86, west of Stewart's, is 3 ft. wide, principally carbonate of lime, spotted with lead, worth about 6 cwt. to the fathom. The lode in the rise in the 74 west is 4 ft. wide, very kindly, yielding half a ton per fm. At Gilpin's shaft, the lode in the 74 east is without improvement; in the rise over this level west no lode taken down. The lode in the 62 west has turned out well this week, making nearly 1 ton per fm. The lode in the 50 yields 10 to 12 cwt. per fm. The 40 west has occasionally good stones of lead making on the wall.

LAMHEROEE WHEAL MARIA.—We completed the flat-rods to Jessie's shaft on the 6th Sept., and connected the same machinery to the engine this morning (Monday); being a complete job, it works well, and requires no alteration: the water will be all pumped out by 2 o'clock p.m., and the men, nine in number, will commence at once to cut pit, which will be completed by the end of next week, and the pent-house put in; then we shall commence sinking the shaft with all possible speed, by nine men. Our dresser has promised the purser to make 30 cwt. of tin marketable by the end of this week, which we shall sell at once. I intend to fill all the barrels that we have now at the mine with arsenic next Saturday (to-day), which will contain 3 tons, and we shall pick up more old barrels as soon as possible.

LEWIS.—The north lode in the 80 fathom level, east from tin shaft, is 2½ ft. wide, with kindly appearances, opening good tribute ground. Praed's lode, in the 40, west from copper ore shaft, is 6 in. wide, unproductive; this lode in the 30, west from copper ore shaft, is 18 in. wide, producing good stones of tin. In the 20, west from Gundry's shaft, it is 2 ft. wide, good work for tin; in the same level, east from Gundry's shaft, it is 8 in. wide, low-price work; this lode, in the 10 fm. level, east and west from Gundry's shaft, is 6 in. wide, unproductive. In the 30, east from Praed's shaft, it is intersected by a cross-course, and from the appearance of the intersection it is right hand—heave—we shall drive south to cut it. We are continuing our operations in the south ground and eastern part of the sett, in the appearance of which there is no alteration since my last report.

LISBURN.—In the 44 fm. level, west from the western rise, the lode is about 2 ft. wide, worth full 1 ton per fathom. In the deep adit level, west from the middle flat-rods shaft, the lode is from 3 to 3½ ft. wide, worth from 1 to 1 ton per fathom. The lode in the 105 fm. level, west from Eddy's shaft, is 3 ft. wide, worth full 2 tons of rich ore per fathom; in the same level east the lode is 2 ft. wide, worth 1 ton per fathom. Other places as reported last month.

LYDFORD CONSOLS.—At Wheal Mary, the lode in the adit level, south of the gossan shaft, is large, being full 2½ feet wide, and presenting a favourable appearance—producing occasionally stones of lead. At Wheal Adventure, the lode in the adit level, south of the engine-shaft, is composed of flookan and spots of mndie—a kindly lode. The lode in the cross-cut, driving west from the adit level, is in a disordered state; our surface jobs are progressing satisfactorily. We have been for some days past expecting some timber from Plymouth for our shears, &c., which I am sorry to say, has not as yet arrived; this will impede our progress a little, and we shall not now expect to go to work this week. I will go to the quays to-day, however, and see if the timber has arrived there, when no force shall be wanting to get it on the mine.

MERLLYN.—The whim-shaft sinking below the 26 is producing good stones of lead ore; the rise in the back is worth 25s. per fm. The winze below the 16 is worth 6s. per fm.; the 16, west of the shaft, is worth 20s. per fm. The 15 yard level west is worth 10s. per fm. The engine-shaft is completed to the 26 fm. level, and was reset on Saturday to sink 10 fms., contract price 100 guineas, which I hope will be completed as soon as the engine is erected. We have sampled 40 tons of lead ore, which will be sold to-morrow (Sept. 11).

NORTH BASSET.—The lode in the 82 fathom level continues about 6 feet wide, a beautiful course of yellow ore. In the bottom of the 72 fathom level we have a tribute pitch working at 1s. in 12, and in the same level, west of the new shaft, we have a good lode of grey and black ore. In the winze sinking under the 72, west of the new shaft, the lode is 4 ft. wide, an excellent course of yellow ore. All our tribute pitches are looking well. We sampled last week 206 tons of copper ore, produce varying from 74 to 21s., which realised 1418s. 17s. 7d. We have recommended sinking the new shaft under the 82 fm. level, and look forward to increasing our returns rapidly.

NORTH BULLER.—Lousia engine-shaft is now sunk 40 fms. from surface, and the men have commenced driving north and south. On Friday, Aug. 29, was our monthly setting, and the shaft not being down, we set to complete it to the 40 fm. level by 12 men, at 22s. per fm., and to drive north and south of shaft 3 fms. each way, at 14s. per fm. The ground in King's shaft is getting more favourable for sinking, and we are glad to inform you the lode is very much improved since last reported, it is 1 ft. 6 in. wide; to day (Sept. 8) we broke some very pretty stones of copper ore out of it. Taking the lode altogether, we have never seen it look so well as it does at present. The lode in the adit end is about 2 ft. wide, but unproductive.

PETER TAVY AND MARY TAVY.—The 43 fathom level, east of shaft, is extended nearly 2 fms. through a productive lode; the lode at present in the end is 20 in. wide, with a leader of 8 in. wide in the back of the level, producing good work, which appears to be getting further down in the level as it is extending eastward; the ground is improved for driving—at this point let to six men, at 10s. 10s. per fm. The 43 fm. level, west of shaft, is holed to the winze, which was sunk by the former company in the bottom of the 32 fm. level. We have ascertained that the lode is standing on the north side of the winze, and the south wall of the lode looks to take the roof; we are getting on well with the trial shaft on north lode, and hope to cut some copper this week.

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RIX HILL.—The 50 east is without alteration. The cross-cut north is progressing favourably. In the 15 east the lode is kindly, producing a little tin. There is no alteration to notice in our tribute department.

SILVER VALLEY AND WHEAL BROTHERS.—The lode in our rise in the back of the 24 fm. level, west from Oak shaft, has increased in size, and as rich as ever we had it. We are glad to say we break down more or less good work almost daily, and to-day we have broken 12 bags. Some of the stones are very rich for native, crystallised, and grey oxide of silver. A sample was assayed yesterday from similar stones brought up to-day, and made a produce of 324s. 0s. of silver to a ton of ore. The best of our branch is making west in a beautiful stratum of white killas. We have set the end of the 24 fm. level to drive west by two men; and, as our branch is making west in the rise, we think we shall have silver again in a short time in the end. Our other levels are much the same as when last reported upon. We have ordered sleeves for dressing.

SOUTH CARN BREA.—The long-pending disputes about this promising sett are amicably arranged, and a new sett has been granted, which will give the shareholders an extended interest of several years in the mine. An engine will be erected forthwith, which will enable us to extend our operations without delay. The mine presents the most cheering prospects.

SOUTH TRELAWNY.—We are still cross-cutting west in the 60 fm. level with six men. I cannot see any improvement in the ground since my last. There is no lode or branch discovered yet on the eastern part of the boundary.

SOUTH WALES.—The agreement for a lease of the sett comprising Bod; coll and Dolwen Mines has, in conformity with the resolution to that effect of the former meeting of the 23rd April last, been executed, and the consideration money paid. Being assured that the calls in arrears will be forthwith paid, there is no necessity for forfeiting any shares at present. As regards the working of the sett, I have to inform you that Mr. Lewis Pugh, of Aberystwith, has driven an adit and sunk a piece of ground in the 100 fm. level, and has, under the most unfounded presumption of his being a piece of old enclosure belonging to him, but which I have every reason for asserting belongs to this company, as will be shortly proved. In August, 1850, it was considered advisable to suspend all our workings, inasmuch as Mr. Pugh was, by his encroachment, actually proving the most desirable portions of our sett on each side of his operations. In consequence of the very important discoveries made by Mr. Pugh, I instructed Capt. Barbary, in May last, to sink a shaft within 7 fathoms of Mr. Pugh's works. For some time Mr. Pugh's men in caused considerable obstruction by destroying at night the work done by our men in the day; however, by perseverance and a little force, our men have succeeded in unobscured the shaft, and the lode is 12 fms. wide, and 18 in. in daily expectation of their cutting the lode; and, judging from the very favourable indications and the productiveness of Mr. Pugh's operations, I feel every confidence in being able to report that we are sinking upon such a rich lode as will soon place the adventure in the dividend list.

At the Cyfannedd Fair Lead Mine two-monthly meeting, on Monday, the accounts showed—Cash expenditure to 31st Aug., 258l. 8s. 3d.; by calls, 250l.; balance due to secretary, 8l. 8s. 3d. The assets were: Ore in stock (say), 100l.; call made this day, 250l.—350l.—The liabilities: Balance due secretary, 8l. 8s. 3d.; estimated costs to end Oct., 150l.—158l. 8s. 3d.: leaving balance in favour of mine, 191l. 11s. 9d. Some splendid samples of ore were produced.

At the Dolfrwynog Copper Mine two-monthly meeting, on Monday, the accounts showed—Cash expenditure to 31st August, 267l. 7s. 5d.; balance in hand, 107l. 12s. 7d.—375l.—By calls, 375l. The assets were: Balance, 107l. 12s. 7d.; call made this day, 375l.—482l. 12s. 7d.—The liabilities: Estimated costs to end Oct., 250l.: leaving balance in favour of mine, 232l. 12s. 7d. Some very promising specimens of malachite were produced.

At the Cefn Cam Slate Quarry two-monthly meeting, on Monday, the accounts showed—Cash expenditure, 111l. 6s. 4d.; balance in hand, 13l. 13s. 8d.—125l.—By call, 125l. The assets were: Balance in hand, 13l. 13s. 8d.; call of 2s. per share made this day, 250l.—263l. 13s. 8d.—The liabilities: Estimated costs to end October, 200l.: leaving balance in favour of the company, 63l. 13s. 8d.

At the Nant-y-Car meeting, on Wednesday, the accounts were audited and passed. The reports from the mine (a copper mine, in Breconshire) were highly encouraging. A letter was read from Capt. Edward Roberts, the company's inspector, in which he says—"We have fine solid copper ore in the roof of the adit, equal to any sample ever produced in London." The distinguishing feature of this mine is the lime stratum in contact with the lode, which is remarkably pure, and of first-rate quality for richness, and has been proved by the level at a distance of 25 fms. from the main shaft, thus ensuring abundant returns. From the discoveries made, and now daily developing, some novel and important results may be relied on. We have reason to know that the few shares which were recently in the market have been promptly taken up, and 10l. is now readily paid. We are also glad to learn that the shares are in the hands of *bona fide* holders, who have the means and the spirit to carry on the works efficiently. From the nature of the strata, interest will naturally be excited in the minds of persons engaged in mining enterprise.

At Great Wheal Badden meeting, on Tuesday, the accounts showed—Balance last account, 808l. 12s. 1d.; interest and commission, 13l. 10s.; secretary's salary and incidental expenses, 42l. 10s.; June cost, 376l. 0s. 3d.; July, 480l. 12s. 2d.—1721l. 4s. 6d.—By July lead sold (less dues), 667l. 12s. 10d.; Aug., 608l. 2s. 10d.; materials sold, 43l. 5s. 9d.: leaves balance to next account, 392l. 3s. 1d.; the estimated produce of lead and jack being 473l. 5s. 3d.: leaves balance of 81l. 2s. 2d. The report appears in another column.

At Wheal Comfort meeting, on Tuesday, the accounts for April, May, June, and July showed—Balance from last account, 211l. 19s. 6d.; costs and merchants' bills, 1404l. 0s. 3d.—1615l. 19s. 9d.—By ores sold (less dues), 1000l. 11s. 7d.; balance of bill of junk, 4l. 8s. 3d.: leaving balance against adventurers, 610l. 19s. 11d.

At the Great Work Tin Mine meeting, on the 26th August, the shareholders in this fortunate concern presented their managing agent, Captain Richard Blight, with a very splendid silver, of the Victoria pattern, value 30 guineas, as a token of their esteem for him, as a miner of undoubted talent, zealous in the strict performance of his arduous duties, and for his unflinching attention to the company's best interests.

At West Damsel meeting, on the 5th inst., the accounts showed—Balance last account, 49l. 1s. 7d.; labour cost for June, 40l. 3s. 1d.; July, 34l. 4s. 7d.; merchants' bills, 7l. 12s. 9d.—131l. 2s.—By call in July, 128l.: leaving balance to next account, 3l. 2s. A call of 5s. per share was made.

At the East Wheal Reeth bi-monthly meeting, on Thursday, the accounts for the last two months showed—Balance in hand, 125l. 12s. 2d.; calls to receive, 270l. 3s.—395l. 15s. 2d.—Liabilities, including merchants' bills and engine, 303l. 3s. 11d.: leaving balance in favour of the mine, 94l. 11s. 4d. The affairs of the mine were reported to have been brought into a very satisfactory position.

A meeting of the Nantmely Silver-Lead and Copper Mine (Montgomery) was held yesterday (J. R. Overman, Esq., in the chair). The meeting, which occupied some three hours, did little or nothing beyond adjourning for five weeks, the object of which it is hard to determine, as the workings have been suspended at the mine. The material points may be confined to a few words. The liabilities are 203l. 8s. 1d., in addition to which it was stated by Capt. Reynolds there might be 10l. or 20l. due. The cost for the past month would not exceed 20l. or 30l., and all works had been suspended. Capt. Reynolds had been dismissed, and owed 100l. on his shares, 200 in number, and Captain Barber appointed at 2l. per month. The purser or clerk of the mine had also been discharged, and therefore the only expenses were the managing captain's and the London. Extracts from the reports were read, which are by no means creditable to the captain, whether considered in reference to his position as a practical miner, or as a recorder of facts—his reports having evidently misled the shareholders, although we do not mean to assert that such misrepresentations were intentional; indeed, the fact that he now holds one-fifth of the shares should be in itself a sufficient answer. However, there can be no mistake but that the committee were deceived; and no explanation removed the cloud which hangs over the affair. It is unnecessary to follow out the discussion, or conversation, which ensued, but from which we gathered that 74 tons of lead ore, and 64 tons of copper ore, were the results of an outlay of 5120l., while it was represented some months since that 600l. worth of ore was at grass, and the several ends yielding 2 to 2½ tons of ore per fm., and valued at 40l. to 50l. per fm. the running ground. It would appear that not more than 1500l. to 2000l. had been expended on underground works, the residue being on surface, which we presume includes agencies, &c. We think it only right here to close our notice, although we may mention that a call of 6s. per share, to liquidate the costs incurred, was resolved upon.

Respecting the meeting of Treburget Mine adventurers, noticed in last week's *Mining Journal*, we are informed by Mr. G. Nicolls Simmons that no legal meeting has been held since 31st of May last; that the pretended meeting in question was got up by two persons holding six shares, and who had not paid the 10s. call made at the last meeting. Mr. Simmons further states that the books and accounts are always open to any and every adventurer, and the persons above-mentioned have been repeatedly invited in vain to do so; and that he is still in advance to the mine of nearly 200l.

At Alfred Consols, the lode in the boundary winze, under the 70 fathom level, has improved from 140l. to 170l. per fm. This looks well for the level coming on below.

At Bedford United, the lode in Lintern's winze, in the bottom of the 103, is 3 ft. wide, yielding from 10 to 12 tons of copper ore per fathom. The pitches look well, and the agents are confident of keeping up the present returns.

At Copper Bottom they are removing the pitwork and rods from the north engine-shaft. All parties seem to entertain a favourable opinion of the western part of the sett. May's shaft is cutting down from adit to the 10, and ground cutting for angle bob.

At Hingston Downs they have cut the lode in the 55 fathom level, and driven west about 5½ fms., yielding on an average 6 tons of good ore per fm., the eastern end now turning out 8 tons; this is driving by tributaries at one-fifth tribute. The mine is better ventilated, and will doubtless increase the samplings for the time to come. They have at quay and surface, dressed and undressed, about 50 tons of ore, expecting to increase it to 80 by the end of the month. A grinder is in course of erection. The ore generally is of rich quality, and a good time seems coming to this highly promising concern. Few sets in the neighbourhood can show a tenth of such prospects, though hawking their shares at three times the price. Time will show the folly of it.

At Silver Valley and Wheal Brothers, the famous silver lode appears about to rival its former celebrity. A rich branch of silver ore discovered in new ground about a month ago, has increased, as opened upon, both in produce and richness, and the result of an assay of the ore raised on Wednesday gives 3248 ozs., or nearly 2½ cwt., of fine silver to the ton of ore. Capt. Oliver Matthews, formerly for years agent of the Columbian Mining Company, superintends the works, under whose advice plans have been adopted, which guarantee the security of the valuable minerals raised. The mine has been visited by several parties this week, who state the present returns to be fully equal to the produce of the mine when formerly worked, and at its zenith. It is the opinion of experienced miners that the ore discovered is forced up from some large deposit existing in depth.

At West Phoenix Mine some very fine branches have made their appearance in the shaft, containing rich spots of yellow ore.

At Treleigh Consols Mine the lode in the 90 west is 3 feet wide, worth 28l. per fathom.

At Daren, the ore ground in Oliver's adit is improving for copper. The silver-lead bargains yield an average quantity of ore.

At All-y-Crib, the water is now drained to the lowest working of the late company, and a cross-cut is driving from the bottom of the shaft from which a great deal of ore is expected—the lower level having been, extended upon a lode bearing too far to the north of west for the main body of the ore vein.

At East Pool, Illogan, in the 100 fm. level, the 80, and 70 over, the recent trials on the north lode have yielded results of the most encouraging character. The mine is represented as about paying cost.

From the Kenmare Mines the report, just received, is of a highly encouraging nature. At Campbell's shaft the lode increases in size as it deepens. The north wall is regular and well-defined; it yields from 10l. to 12l. per fm.—good quality copper ore, paying double the expense of sinking; this promises well for the future levels under. The rise in the back of the 36 east, the stopes in the level, and those east of Lamb's winze, which is now down to the 27, are all working at a profit, though small. Every preparation is making for opening new ground, and deepening the shaft. [A full report is given in another column.]

At Condurrow, Camborne, they have a rich branch of tin in the 100 fm. level east and west, said to be worth 50l. to 60l. per fm.

At South Tolgas, Redruth, the rise in the back of the 54 east is worth 2 tons of copper ore per fm. The 42 west is producing 2 tons of excellent quality ore per fm. The same level east and west, on Youren's lode, is looking exceedingly well.

At Polberro Mines, the yield of tin monthly is about 26 tons. The workings are progressing steadily, and the stamps performing well.

Old Basset Mine has 10 tons of copper ore ready for market, estimated worth 10l. per ton.

At Wheal Seton, they have a good course of ore in the 100 west towards Tilly's shaft; the lode in which for the whole length of the shaft turns out 25 tons of copper ore per fathom.

Wheal Precious has a very promising lode driving westward. At North Basset, the report, among our British Mines, need only be referred to, showing the spirited manner in which the mine is being developed, and the ample returns that are making—the prospects being equal, if not better than ever.

At Wheal Hamlyn, they have sunk a winze 3 fm. 2 ft. west of quarry shaft, and are driving the ends both east and west, to hole to winze, and get ventilation. The lode is spoken of as being very promising for the depth; it has a leader on the south wall, 1 ft. wide, composed of fluokan, prian, peach, spar, and mundie, with rich spots of copper pyrites. The lode is altering its direction, the ground appears softer, and a great change is expected soon.

Wheal Langford and Baring United expect to put the steam-engine, now erecting thereon, to work on or before Thursday fortnight.

We are much gratified in being able to announce that the long-pending dispute that has hitherto precluded the working of South Carn Brea is now positively settled, a new sett granted, and a suitable engine on the eve of being placed on the mine.

We are informed that the Carn Valley Mine has been purchased, and operations commenced by a spirited London proprietary.

Shares have changed hands during the week in Alfred Consols, Tremayne, Botallack, West Providence, Bedford, Devon Consols, Trelawny, Mary Ann, East Russell, Merilyn, Wheal Venton, Boringdon Park, Trevelick, Treleigh, Wheal Basset, Bryntail, Carn Brea, Treviskey, South Frances, Condurrow, Cook's Kitchen, Wheal Buller, Cefn Gwyn, South Caradon, Penzance Consols, Silver Valley, West Alfred, Hingston Down, Great Wheal Badden, West Caradon, Wheal Reeth, East Wheal Russell, Hennock, South Tamar, East Tamar, and Wheal Arthur.

In Foreign Shares, transactions have taken place in United Mexican, Santiago, and Copiapo.

From the Alten Mines reports have been received to the 28th August. The returns for June and July are assaying; the result will be forwarded by next post. At Raipais the prospects are fluctuating. At the United they are more favourable. The Old Mine is making satisfactory returns. At Mancuer the tributaries are returning more ore than for some time past. The report will be found among our Foreign Correspondence.

At Quenangen Mines some favourable changes have taken place, as will be perceived by referring to another column. The workings on C lode have improved in a remarkable degree; and on E and F they are at present very flattering; these lodes are increasing in size as they hole downwards. About 8 tons of ore lie at the shipping place. A cargo for the sloop is expected shortly.

The United Mexican Company have advices to the 28th of July. The quantity of ore for the month has been maintained, but the quality has declined. The quarter ending June shows a loss of \$23,208 5 6. All operations are suspended at Aidana and Trinidad for the present, as well as the cross-cut of San Ignacio. At Mina Grande, owing to the rainy season, the workings have been neither extensive or satisfactory. The price of forage maintains its exorbitant rate. A full report will be found among our Foreign Correspondence.

From Linares the report is to the 30th Aug. The lode in the 55, west, of Wilson's shaft, is worth 3 tons per fm.; the stopes are turning out 5 or 6 tons per fm. The 45, east of Shaw's, is worth 2 tons per fm. The tribute pitches generally are looking favourable. Lead ore weighed in to Aug. 30, 40 tons 14 cwt.; total in stock, 743 tons. Pig-lead smelted in the week, 25 tons 6 cwt.; total in stock, 321 tons 16 cwt.

From the St. John del Rey Mines advices have been received to the 28th of July. The produce of gold for the month of June amounted to 8976l. 18s.—Less costs thereon, 5172l. 1s. 1d.: leaves profit, 3804l. 16s. 11d. The produce of stone from the mine is of an inferior quality, and likely to remain so until October, when Capt. Treloar confidently states, "the gold returns will therefore forward frequently exceed the highest on record." 48,221 ounces had been sold at Rio, realising 18,816l. 18s. 2d. Stamps working during the month of June, 115-33 heads. They are preparing six new arrastres, and intend to double that number shortly. At East Cachochira, eastward the lode is opening very favourably. The Bahu has sensibly deteriorated ever since the lode took an inclination southward. A full report will be found in another column.

From the Imperial Brazilian Mines, the advices are to the 28th of July, four days prior to which we regret to announce the decease of the chief officer, Capt. Joel Hitchins. His death, being quite unexpected, has naturally caused some consternation upon the spot, as it will, doubtless, among his relatives and numerous friends. No cause has been assigned, which is the more to be lamented, as he was a man highly beloved; and, as one of Cornwall's most spirited and enterprising miners, his loss will be regretted the more, not only in the district of his birth, but through the country generally, and in the various foreign ones he visited. The produce and prospects, both at Gongo and Bananal, are very encouraging, the gold produce from the 28th of June to the 27th of July being only 13 lbs. 8 ozs. 9 dwts. A remittance of 45 lbs. arrived by the steamer. At Bananal, the ground above the 24 has been thoroughly searched, and holds out but little hope of success; the only chance seems to be from expectations below. The shaft is down 6 fathoms, and ground tolerably fair for sinking. A full report will be found in another column.

HULL, THURSDAY.—Messrs. T. W. Flint and Co., state that mining shares are steady, but not in active request. A few parties who can make profits upon Tremaynes, and one or two other stocks are realising them. Wellingtons are offered low. Alfreds quiet. Merlyns offered at a low figure.

The French Government has just decreed that rough cast-iron (*fonte brute*), destined to be made up into machinery for re-exportation, is to be admitted into France duty free, whether arriving by sea or land, and whether in French ships, or the ships of the exporting country. In the latter case a declaration of the origin of the iron will be required. Sufficient security must be given for the re-exportation, or replacement in bond of the weight of metal imported.

The quantities of gold and silver continuing to arrive in this country are enormously large. The *Africa*, which arrived at Liverpool on Saturday, brought \$831,383 in gold, and the *Baltic*, which arrived on Wednesday, brought \$600,000, together nearly equal to 300,000l. The West India mail steam-ship *Dee*, which arrived at Southampton on Tuesday, brought \$1,940,222 in gold and silver, equal to 388,045l. Thus, the arrivals of gold and silver in five days amount to upwards 650,000l., and that after an influx of four millions of gold from the States, and large arrivals from Mexico and South America. The tendency of the precious metals, wherever found or produced, seems to be to England—at once the bank and the workshop of the world. This must be more and more so every year, for the exports of this country continue to increase rapidly. The value of our exports for the first seven months of 1851 was 41,512,956l., against 37,808,972l. in 1850, and 32,879,865l. in 1849.

Prof. Abene, of Turin, has published an analysis of the coal recently discovered at Gonessa, in the island of Sardinia, from which it appears that it contains a large proportion of tar; that the inflammable gas it contains does not burn with sufficient clearness for the purposes of illumination, but that the coke obtained is of excellent quality for steamers and locomotives.

BANKRUPT EFFECTS.

MESSRS. CROKER BROTHERS & CO. have received instructions from the assignees of Mr. T. Pearson, slate merchant (a bankrupt), to SELL, BY PUBLIC AUCTION, on Monday and Tuesday, 23d and 24th September, at the Cann Quarry Slate and Marble Works, COXSIDE, PLYMOUTH, the whole of the VALUABLE STOCK.

Comprising a quantity of inland, Ellabellian, and other chimney pieces, in elegant style, and of rare description and design, including Italian black, Belgian, Egyptian, Russian, and other greens, Lumachelle, Grilotte, and Jasper, circular Italian marble slabs, for ladies' work tables; also beautifully carved marble and slate chimney pieces, chimney jambs, Welsh racks, Bangor and Welsh slate, in imperials, queens, duchesses, marchionesses, countesses, ladies, and doubles; also 2 tons of Bradley's best Staffordshire iron fence wire, a very superior sawing machine (nearly new), with iron bed, fly-wheels, wrought-iron shafts, brass bearings, circular saws, chains, rollers, and gear complete, planing machine complete, a quantity of tools, &c., &c.—[For further particulars see printed bills.]—The quality of the stock is well known, and the whole can be strongly recommended for style and durability. Goods can be shipped from the premises.

Further particulars can be obtained of the auctioneers; or of F. Herniman, Esq., official assignee, Bankruptcy Court, Exeter; Messrs. Gibson and Moore, and A. Rooper, Esq., Plymouth, solicitors to the estate.

The Sale to commence each day at Eleven o'clock.
Dated Auction Mart, 33, Whimble-street, Plymouth, 29th August, 1851.

LEAD ORES.

| TENDERS FOR 56 TONS LEAD ORE FROM WHEAL TREHANE. | | | |
|--|----------------------------|-------------|--|
| Bidders. | Likelihood, 6th September. | Amount Bid. | |
| Locke, Blackett, and Co. (purchasers) | | 20 14 6 | |
| Thomas Somers | | 20 6 6 | |
| Executor of J. T. Treffry | | 19 10 6 | |
| Newton, Keates, and Co. | | 20 9 0 | |
| W. J. Cookson and Co. | | 20 10 0 | |
| R. Mitchell and Son | | 18 9 6 | |
| Tamar Smelting Company | | 19 10 6 | |
| Sims, Williams, Nevill, and Co. | | 19 9 0 | |

| TICKETINGS FOR ABOUT 100 TONS NEWTONARD'S LEAD ORE. | | | |
|---|--------------------------------|--------------|--|
| Bidder. | Douglas, Isle of Man, Sept. 9. | Amounts Bid. | |
| Walker, Parker, and Co. (purchasers) | | £10 1 0 | |
| John F. Eytton | | 10 0 0 | |
| Newton, Keates, and Co. | | 9 18 0 | |
| Sims, Williams, Nevill, and Co. | | 9 12 0 | |
| W. J. Cookson and Co. | | 9 9 0 | |
| Locke, Blackett, and Co. | | 8 15 6 | |
| Thomas Somers | | 8 9 6 | |
| Pontifex and Wood | | 8 9 0 | |

| TICKETINGS AT THE WHITE HORSE HOTEL, HOLYHEAD, SEPT. 11. | | | |
|--|-------|----------------|-----------------------|
| Mines. | Tons. | Price per Ton. | Purchasers. |
| Maesyrwddu | 51 | £10 15 6 | Walker, Parker, & Co. |
| Costia Llys | 8 | 11 16 6 | J. P. Eytton. |
| Hendre | 17 | 9 18 0 | Walker, Parker, & Co. |
| Iditio | 6 | 10 1 6 | Mather and Co. |
| Deep Level | 72 | 10 6 0 | Newton, Keates, & Co. |
| Talacra | 20 | 10 14 6 | Walker, Parker, & Co. |
| Lloc | 20 | 11 4 0 | J. P. Eytton. |
| Merilyn | 40 | 11 0 0 | ditto. |
| Axtion | 19 | 10 10 0 | Newton, Keates, & Co. |
| Iditio | 19 | 10 10 0 | Walker, Parker, & Co. |
| Arkansas | 13 | 19 11 0 | J. P. Eytton. |
| Black Craig | 52 | 9 6 0 | Newton, Keates, & Co. |
| Macynillett | 38 | 10 16 6 | Walker, Parker, & Co. |
| Iditio | 14 | 9 3 6 | ditto. |

Sold on the Mine, on the 5th September.

Drigith 18 £12 7 6 Locke, Blackett, & Co.

Iditio 9 7 10 0 ditto

Sold at Aberystwith, on the 12th September.

Bryntail 50 £9 17 6 Sims, Williams, & Co.

Sold at the Mine.

East Wheal Rose 61 £14 1 6 Newton, Keates, & Co.

Iditio 45 13 17 6 Locke, Blackett, & Co.

Iditio 27 11 10 0 R. Mitchell and Sons.

Wheal Trehane 56 20 14 6 Locke, Blackett, & Co.

Carther Consols 50 9 12 0 Newton, Keates, & Co.

Wheal Adams 9 2 6 0 Sims, Williams, & Co.

Wheal Trelawny 76 19 3 6 T. Somers.

Wheal Mary Ann 85 20 17 6 Sims, Williams, & Co.

BLACK TIN.

| Mine. | Tons c. gr. lbs. | Price p. Ton. | Amount. | Purchasers. |
|-----------------|------------------|---------------|-----------|-----------------|
| Georgia Consols | 7 19 3 20 | £24 0 0 | £415 16 0 | Bolitto & Sons. |
| Iditio | 0 17 2 22 | 32 10 0 | 28 15 0 | ditto. |
| Wheal Ruth | 1 4 0 11 | 51 0 0 | — | Union Co. |

| Mine. | Tons | Price p. ton. | Purchasers. |
|-------------|------|---------------|-----------------------------|
| Drake Walls | 34 | £52 0 0 | Tamar Company. |
| Iditio | 34 | 49 17 6 | Biscoe Company. |
| Iditio | 3 | 42 15 0 | Daubuz; Calenick; Williams. |

COPPER ORES.

Sampled August 27, and Sold at Andrew's Hotel, Redruth, Sept. 11.

| Mines. | Tons. | Price. | Mines. | Tons. | Price. |
|--------------|-------|---------|-------------------|-------|---------|
| Carn Brea | 90 | £4 4 0 | Tywarthayle | 33 | £3 1 6 |
| Iditio | 89 | 6 15 0 | Iditio | 20 | 2 17 0 |
| Iditio | 79 | 5 7 6 | Alfred Consols | 50 | 6 7 0 |
| Iditio | 77 | 4 2 0 | Iditio | 58 | 6 5 0 |
| Iditio | 74 | 2 16 0 | Iditio | 54 | 7 7 0 |
| Iditio | 65 | 5 3 6 | Iditio | 23 | 6 17 0 |
| Iditio | 62 | 13 13 0 | Iditio | 16 | 15 1 0 |
| Iditio | 55 | 1 17 0 | Wheal Tremayne | 88 | 3 2 6 |
| Iditio | 40 | 6 12 0 | Iditio | 38 | 1 11 6 |
| Iditio | 39 | 12 6 0 | Levant | 65 | 1 15 6 |
| Iditio | 34 | 9 10 0 | Iditio | 56 | 8 8 6 |
| Iditio | 31 | 2 18 0 | Wheal Agar | 26 | 2 0 0 |
| Iditio | 1 | 50 0 0 | Iditio | 26 | 10 7 6 |
| Wheal Buller | 112 | 4 8 6 | Carvannall | 34 | 2 11 6 |
| Iditio | 100 | 4 6 6 | Iditio | 17 | 4 5 0 |
| Iditio | 96 | 5 14 6 | Iditio | 14 | 10 5 0 |
| Iditio | 93 | 4 2 6 | West Alfred Cons. | 53 | 3 13 0 |
| Iditio | 88 | 6 14 0 | Cook's Kitchen | 51 | 4 11 6 |
| Iditio | 67 | 6 12 0 | W. Mary, Redruth | 31 | 4 6 6 |
| Iditio | 47 | 2 10 0 | Iditio | 50 | 2 1 6 |
| Par Consols | 91 | 7 3 0 | W. Wh. Providence | 50 | 10 12 0 |
| Iditio | 84 | 6 18 6 | Trezie's Ore | 34 | 1 2 0 |
| Iditio | 82 | 12 4 0 | Iditio | 3 | 31 0 0 |
| Iditio | 49 | 8 15 0 | East Wh. Treasury | 25 | 2 12 0 |
| Iditio | 52 | 3 10 0 | Lewis Mines | 18 | 6 14 6 |
| Iditio | 67 | 2 3 0 | Wheal Susan | 7 | 9 3 6 |
| Iditio | 63 | 2 13 0 | Iditio | 5 | 3 1 0 |
| Iditio | 40 | 8 5 0 | Old Wheal Basset | 10 | 10 11 0 |

TOTAL PRODUCE.

| | | | | | |
|-----------|-----|------------|-------------------|----|----------|
| Carn Brea | 736 | £4434 11 6 | West Alfred Cons. | 53 | £193 9 0 |
|-----------|-----|------------|-------------------|----|----------|

Vauxhall-Nassau Balloon Ascent.—LAST WEEK BUT ONE.—On Monday, the veteran Green will make another ascent in his MAMMOTH NASSAU BALLOON, accompanied by a large number of distinguished persons. This is the same Balloon which made the memorable trip to Germany, descending at Nassau, in the domain of the Duke of Brunswick, in the year 1836. ADMISSION ONE SHILLING. Doors open at Five. Ascent at half-past six precisely. The entertainments will comprise the extraordinary feats of Hernandez, the young American Wonder, and Mdlle. Palmyra Annato, indisputably the two most marvellous Equivocals in the world.—Madame Antonio's Darling Rope Ascent.—Foucault's beautiful and Novel Fire and Water Sports.—Arban's Infatigable Band for Concert and Ball.—Brilliant Fireworks.—Gorgeous Illuminations, &c., &c. The Royal Gardens are open every evening at Seven o'clock (except Saturday). Admission 1s.

NOTICES TO CORRESPONDENTS.

THE COST-BOOK SYSTEM.—Sir: A mine conducted on the Cost-book System is in debt, and it is necessary to pay off the liabilities. The pursuer refuses to advance his share, having a claim on the mine for services; and the other adventurers repudiate his claim under the circumstances, he being a partner in the mine. How is such a state of affairs to be settled?—AN ADVENTURER: *City, Sept. 11.*—[Under the practice of the Stannary Courts we apprehend, on the one hand, that the pursuer could claim a set off to the amount of balance due to him, which sum ought to appear as a portion of the liabilities; and, on the other, the adventurers could deduct the calls due from the sum owing the pursuer, should the latter be the larger amount. At common law the general view of the case is, that a trader in a partnership cannot sue his co-partner, except in banking concerns, and we believe assurance companies, where there are special clauses to legalise such a proceeding. We trust, in the present case, the parties will settle the matter amicably, and not trust to the "glorious uncertainty of the law," by which both sides will be flooded.]

"M." (Glasgow).—A letter addressed to our office will be forwarded.

NEW PLAN OF VENTILATION.—Sir: The peculiar feature of my ventilator—as referred to in last week's Journal—is, that it acts as a pump, discharging the vitiated and supplying pure air, without any perceptible sensation to persons in the apartment. It is a simple piece of mechanism, aiding the powers of nature, and not embarrassing her movements. When fitted into the building, it need not require any additional expense for 20 years, as it is durable, and not liable to get out of order. It is formed of a zinc pipe, peculiarly made, and furnished with a valve to regulate the supply of air, according to the season of the year or the number of persons in the apartment, and with a rain and wind breaker to keep out the rain, and to prevent a person standing underneath, with head uncovered, from feeling the passage of the air. It must be placed perpendicular, as it does not act obliquely. The mouth, when fixed to the ceiling, has the appearance of an ornament, such as was fixed in places of worship where chandeliers were suspended. Any quantity of air may pass through it, according to its diameter, or more than one put into an apartment. My school was ventilated for 200 children, but it is used in the spring and autumn for an occasional oratorio. On these occasions I have seen about 1000 persons present, and not a handkerchief raised either to wipe or fan the face, although all the doors and windows were kept shut, and there is no chimney in the room. It is almost impossible to give a description to enable one being made, without showing sections and giving a drawing. Certain portions of the several parts must be attended to, or it does not act well; but to those who may decide to adopt this ventilator (of which a great number are in successful use), I would prepare drawings and give the necessary instructions. I have given my experience and time gratuitously to those friends who solicited them: my reward has been the consciousness that I have done a little to lighten the evils of life; and, by giving publicity to the invention, you will also confer a public benefit. CHAS. WATSON. *Rhodes-street, Halifax, Sept. 6.*

"A Miner's" visit to the Exhibition is unavoidably postponed.

"J. R. B." (Somerset Town).—While the courts of common law have from time to time considered the nature of property in mines, the nature of transferring it, and the liabilities of shareholders to creditors, numerous cases have come before the courts of equity, by which the relations of shareholders to each other, and their general duties have been defined. The case *Crawshaw v. Manly* appears the most applicable to the circumstances mentioned by our correspondent. In his judgment (Lord Eldon said) "it seems difficult to establish that this is an interest in land distinct from a partnership in trade—a mere interest in land, in which a partition could take place; for when persons have purchased such an interest, manufacture and bring to market the produce of the land as one common fund, to be sold for their common benefit, it may be contended that they have entered into an agreement, which gives to that interest the nature, and subjects it to the doctrines of, a partnership in trade." Lord Hardwicke was of opinion, which has been acted on by Lord Brougham, that an account may be decreed of the profits of a mine, although no injunction lies to restrain the working. In cases of timber and other realties an injunction is inseparable from an account.

"A. B." (Southampton).—The adit question alluded to has been decided in law—attempts having been made to set up a custom for any person to re-open an adit which had been in use, though abandoned for any length of time. In the case *Mazur v. Chadwick*, recently tried, the adit in question had been unworked within living memory, and from it issued a stream originally used for mining purposes, but which had become sufficiently pure to serve for brewing, and had been used in a brewery 36 years; some adventurers re-opened the adit, split the stream for brewing, and defended an action on the ground of this custom. The jury gave the verdict against them.

"M. S." (Lambeth).—A description of Mr. Little's last patented improvements in electro-magnetic instruments, in which the vibration of magnetic needles acts with a dead beat in spirals of wire, with descriptive diagrams, appeared in the *Mining Journal* on the 19th of April last.

"A Miner" (Truro).—We should be glad if in future, in addressing us, our correspondent would write intelligibly. If we read his communication aright, our reply is—"yes." There is no doubt that not only has the mine in question been improperly worked, but loosely managed, and the accounts carelessly kept—if there is not ground for suspicion of something worse. We should, however, advise a little further patience, and see what the next quarter will produce. The sett has always been looked upon very highly.

WREATH ZION.—Sir: I marvel that such letters as a "Zionite" and "One who has Burnt his Fingers" should have ever been written, much less published. If they are shareholders, as they seem to assert, what is their object? A letter to the secretary or the captain would have satisfied all their doubts; or they might have attended the late meeting, and stated their fears and anxieties, when they would have been soothed. Perhaps they wish to buy shares at a low figure; "I wish they may get them." Perhaps they wish to sell Wheel Arthur shares at a fair price. If they really have any Wheel Zion shares, I cannot comprehend why they should wish to destroy them. I am a real shareholder, and feel so confident of the honour and truth of the committee and the captain, that, had I the money, I would venture on the purchase of more shares, and risk burning my fingers severely.—A REAL SHAREHOLDER: *Clapton, Sept. 12.*

WREATH LOVELL.—At the last account meeting, on the 8th August, a dividend of £2 per share was declared (860); this last dividend will make 8s. per share in two years.

GREAT WREATH TONKIN.—Sir: Will any of your correspondents oblige me with some information respecting the progress of this adventure? From the highly-favourable reports of some certainly respectable trust-worthy agents, there would appear but little doubt of the undertaking presenting more than usual prospects of success: It would be a pity, therefore, if, from apathy on the part of the projectors or shareholders, the sett should remain unworked.—W. M.: *Glasgow, Sept. 9.*

ANGLO-CALIFORNIAN GOLD MINING COMPANY.—The letter of "A Scrip-holder, J. M." shall appear next week, as also that of "A. C." The latter appears to us to be of interest and moment, on which we may have occasion to make some remarks. The notes from "J. R." of the Temple, on the matter of Joint-Stock Companies and the "Registration," shall have attention. We are disposed to think our correspondent right.

WEST UNITED HILLS.—The letter of "A Shareholder" shall appear in our next Journal—a pressure of matter compels its postponement.

"A Shareholder" should apply to the secretary for the information.

Mr. Mitchell's Manual of Practical Assaying, Budge's Miner's Guide, and our Glossary of English and Foreign Mining and Smelting Terms—they can be had of any bookseller. The communication of "A. M." (Edinburgh) shall appear in next week's Journal. The unusual length of our mining intelligence compels us to postpone Mr. W. L. Faber's paper—"The Igneous Theory—A Reply to Mr. Mushet's Article: 'The German School of Geology'" likewise; Mr. Craddock on the Universal Condensing Engine, and several other papers.

The Theory of Mineral Veins,

BY EVAN HOPKINS, ESQ., C.E., F.G.S.

We have pleasure in announcing, that the chapter on this important subject, as newly-written for the second edition of Mr. Hopkins's work on "Terrestrial Magnetism," will appear, as a series of papers, in the *MINING JOURNAL*, with the necessary illustrations.

The Cost-Book System.

Having repeated applications for particulars respecting the Cost-book System, we have reprinted, as a pamphlet, the paper descriptive of its principles and practice, which appeared in the *Mining Journal*. Copies can be procured through any bookseller or newsman, or at our office, price 6d.

•• We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses—not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

•• It is particularly requested that all communications may be addressed—

TO THE EDITOR,

Mining Journal Office,

26, FLEET-STREET, LONDON.

And Post-office orders made payable to Wm. Salmon Mansell, acting for the proprietors.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, SEPTEMBER 13, 1851.

The *MINING JOURNAL* is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

We cannot object to Mr. CALLOW, that he is unwise in proposing, as he does by a communication which we give in another column, that facts demonstrated should speak instead of arguments which unsupported must lead to speculative conclusions. There is, perhaps, only one difference between him and our correspondent, Mr. COPELAND, who has the honest courage to avow his sentiments in his letter of last week. That variance is very common between disputants having a bias from prepossession; namely, each party is

disposed to make the facts bear testimony in favour of his preconceived views, by giving the inferences to be deduced a special direction, whilst, in truth, the consequential effect may be positively different from the assertion of both,—now justifying, now falsifying either, as in the trite fable of the chameleon. In endeavouring to arrive at a decision which may establish the strict justice of the case, as applicable to the position of one side and the other, we conjure our correspondents to carry on the controversy in the language of calm reasoning, and not to revert to personalities, or take offence from that which is not personal, nor more than unintentionally off-hand and general. We are glad that Mr. CALLOW disavows any hostile reference to our other correspondent, and, indeed, though we felt disposed to question some harsh expressions in Mr. CALLOW's former letter, we think their general import was more intended to convey condemnation of a practice than to imply offence or pointed allusion. There is a vast amount of time lost in bad-temper; let us, then, for this occasion, examine cautiously, and advance steadily, with frigid rationality, to dispose of every question which any reasonable doubt can raise as to the practicability of using the PATENT POWDER.

When a man of such acknowledged intelligence as Mr. COPELAND limits himself to the objections contained in his letter, signed "G. C.," in the *Journal* of the 23d of August, it may be fairly assumed that they are the principle points for consideration; these are, as to *charging*, with regard to the friction in ramming home,—and as to explosion, respecting the effect of the gaseous products. The latter we may take, upon the evidence before us, to be set at rest, until fresh investigation disprove the analyses referred to. We cannot admit that the reserve of Mr. CAMPBELL, as suggested, is any more than a natural caution under serious responsibility. What can be more explicit than his language, "after a careful examination," upon this subject? "The odours of arsenic combinations, although in minute quantity, are very easily observed; yet I have failed to observe them, when but a short distance from the explosion; nor in a short time after an explosion can they be at all distinguished in the gas. This is owing, probably, to the rapidity with which they deposit, because of their high specific gravity; and, therefore, *practically, no inconvenience from this source could occur to the miner.*" It is true, he says this was tried on a small scale, but that is what "necessarily all laboratory experiments must be." Our next step would be, to try the powder, under fair conditions, in actual mining operation, in "hot and close ends," or wherever else it might be proposed to introduce it. That it has been so tried and approved, we have learned from satisfactory evidence, and we assume that the testimonials, to which we formerly referred, were sent us with the understanding that their writers might be appealed to.

We approach the other topic, deprecating any conflict of opinion as to the form of the bore, whether triangular or round. Grant that it is square, triangular, or oval, and *never true*; that, according to prevailing practice, it takes all manner of whimsical shapes in its direction to the chamber, from a right line to a corkscrew. What then? Are we so poor in resources as not to be able to adapt tools to the requisite work for suiting the bore to the cartridge? If this powder be otherwise desirable, we cannot suppose that a single wedge would pass over without having innumerable projects for effecting the proposed object. Supposing it be established to be a fact, as at present asserted, that 1 lb. of the patent powder will do as much as 8 lbs. of common gunpowder, and that the proportion of the diameter of the bore would be in the same ratio, would it not be worth additional attention to save such borings as 4½ and 5-inch diameters? It would be possible to do everything necessary with the ordinary tools, employing them with greater care—in doing which we can well conceive that time would be saved by using the more compact charge.

The challenge of Mr. COPELAND we, therefore, regard as by no means a wise test; and it is one which mere bravado should not induce the other party to accept. The question put is, whether cartridges of the new powder, meeting obstructions to impede their progress, would, if exploded, have greater or less effect than others under the same circumstance? We are quite aware that irregular borings are common in certain districts; but we cannot think that it is a necessary consequence of anything but careless work or bad tools. In some of the hardest rock, where tin cartridges were used, we have seen the men vie in work as true almost as if out of a lathe; and we cannot doubt that, if the miner have to make a bore only 2 inches in diameter, instead of 5 inches, under the condition of its being perfectly true, it will be so for all practical purposes. But still we reserve some further observations as to the tests which should be applied to ascertain the physical properties of the patent powder. These experiments will not suffice on a small scale; and we must be assured that no omission will have the effect of exposing to peril the lives of our fellow-creatures. We must not be supposed to undervalue Mr. COPELAND's solicitude in this respect. It is our's as well; and we shall combine with him in every fair exertion to effectuate such a laudable desire, and secure the protection of even the humblest of our miners.

However common place and usual may appear the painful task which hebdomidally becomes our duty of recording those continuous fatal casualties in coal mines, which disgrace us as a mining community, the real extent of destruction is not apparent to the mind, unless a review of a number of accidents over a certain period of time is taken. If we look back from the first week in Aug. last, six short weeks, we shall find recorded in our columns about 110 deaths from the following accidents:—Malago Vale, near Bristol, by rope breaking, 6; Balue House Colliery, Wakefield, explosion, 2; Ubbertley Colliery, in the Potteries, explosion, 7; Washington Colliery, Durham, explosion, 33; Balance Pit Colliery, Werfa, near Aberdare, rope breaking, 14; Bunn's Lane Colliery, Dudley, skip falling down shaft, 2; Deep Pit Colliery, Kingswood, skip drawn over pulley, 1, and mutilation of 8 others; and from what may be termed accidents of common occurrence, 45. In addition to these 110 violent and untimely deaths, are to be added numerous amputated limbs and broken bones, bruises, concussions, and other injuries, by which many are crippled for life—an enumeration of one-half of which never finds its way into the public press. Mr. DICKENSON, the Government Inspector, who has carefully examined many collieries in the Kingswood district, made, at the inquest held on the body of NEWMAN, at the Deep Pit Colliery, among others, the following pertinent remarks, which are worthy the attention of viewers in all parts of the kingdom:—

"In the course of my inspection of the collieries in the Badminton district, I could not fail to observe that sufficient attention was not paid to keeping plans of the underground workings; but the proprietors immediately undertook to procure them. In consequence of the absence of fire-damp, it is well known that ventilation in this district has not assumed the importance which it has done among the 'fiery' collieries where fire-damp has existed. Ventilating furnaces are here almost unknown; and in those shafts where mechanical means at all existed, they consist of a stream of water turned down the shaft. The consequence of this was, that in sultry weather, the current of air was extremely sluggish; it became charged with black damp, which, although not liable to explode, was very pernicious to the health of the miners. * * * With good shafts and a good rope, there is, I consider, very little danger in descending pits; and in almost every case it was possible to judge by the appearance of the rope when it was in a fit state for a man to depend upon it."

The adjourned inquest on the body of STEPHEN NEWMAN, who was killed at the Deep Pit Colliery, Kingswood, by the cart being drawn over the drawing wheel, as stated in our last Number, was concluded on Tuesday; and, from the evidence adduced, it appears that more blame attaches to the conduct of the engineman (JOHN STONE) than the first accounts led us to believe. The first witness was JOHN PARKER, who stated that he was at the pit's mouth at the time of the accident, and STONE was standing by talking. He told him the "witness" had gone up; and that it was a "journey of men" coming up, when STONE said, "Then I'll go in." There was then plenty of time for him to have stopped the engine in time. He rang the bell three times before the cart went over the wheel; he saw NEWMAN fall down the shaft, and helped to extricate the men from under the cart, among whom was a son of his own. He heard no noise of hammering in the engine-house after the accident. Mr. BRAINE, the owner of the colliery, and Mr. DICKENSON, the Government Inspector, elicited from the witness that there was much irregularity practiced which might deceive the men at surface. Sometimes a signal would be given that a journey of men was coming, when the men would wait for others, and send up a load of coals instead. It was necessary to be more particular when men were coming up; and it was usual to drive the engine slower. Had never seen any levity or carelessness about STONE, although he had a similar accident once before. GEORGE KING deposed that he was employed to look

after the pumps; at the time of the accident was about 10 yards from the pit's mouth, and was throwing some coals on the engine fire. About two minutes before the accident, saw STONE go towards the engine-house. There was a great noise; and heard STONE call out, "Quick! run George, and help pull up the rods." He did so, but it was too late, and STONE showed him the broken pin; did not hear any hammering in the engine-house. SAMUEL OSBORNE, the blacksmith, made the pin which had broken, two years since; considered it quite strong enough, and did not think the ordinary working of the engine could have broken it; did not think the sudden reversion of the handle could have broken it. The Coroner cautioned STONE in the usual manner, who said it was not his fault; the engine broke, and he could not help it; and he immediately showed KING the broken pin. The jury, however, found him guilty of "Manslaughter;" and the coroner committed him for trial at the next Gloucester Assizes.

The inquest on the bodies of the 14 men and boys, who were unfortunately killed at Messrs. NIXON and Co.'s Balance Pit Colliery, as recorded in our last Journal, was also adjourned to Tuesday, to enable the Coroner to communicate with the SECRETARY OF STATE. It appears that several of the men were ascending and others descending; and, as the whole machinery of the pit is completely broken and destroyed, the real cause of the accident will probably not be discovered. The names of the deceased are—J. PERKINS, aged 35; T. HUMPHREYS, 11; R. HUMPHREYS, 27; D. HUMPHREYS, 29; J. ROGERS, 35; R. MORGAN, 36; D. WATKINS, 27; T. PENN, 22; D. WILLIAMS, 20; W. JONES, 28; D. LEWIS, 22; T. GRIFFITHS, 17; W. GONED, 16; and J. ANTHONY, 13. The evidence of Mr. J. NIXON, (one of the owners), M. MILLS (the agent), EVANS (the pit carpenter), and SNELLING (the smith), went to show that the pit was fitted up in the best manner, with three wire-rope guides to each bucket, and the chains of a size and quality believed to be safe; the latter had been proved to 37 tons. The general opinion is that one of the guide rods broke, and the ascending and descending buckets got entangled, causing a twisting and greater strain on the chain. The verdict of the jury was "Accidental Death," caused by the breaking of the iron rods which connected the guide and the bucket. The jury expressed their disapproval of the present system of letting workmen go down to their work in the same way as materials are got up; and they recommend that drifts should be made in all similar works, so as to enable the workmen to descend without any danger.

The committee, composed of upwards of 50 gentlemen—coalowners, viewers, and others resident around the colliery districts in the neighbourhood of Washington—appointed at the meeting of 27th August last, are exerting themselves to the utmost for the benefit of the relief of the relatives of the 33 sufferers who fell victims to the explosion at Washington Colliery. The owners of the colliery have nobly subscribed 100*l.*; the Earl of DURHAM, 30 guineas; the Haswell Coal Company, 30 guineas; the Lumley Coal Company, 20 guineas, and numerous other liberal subscriptions; and thus, as far as money can effect it, some solace will be afforded the survivors for their sad bereavement. The list of contributors is highly creditable to humanity.

We insert in another column an interesting communication from Mr. THOMAS HARVEY, on the importance and practicability of establishing an "Association of Mining Adventurers," with a view to the formation of a bond of union between all the members of this increasing body; the obtaining authentic reports, the substance of which may be relied on; to form a nucleus, around which the thousands engaged in this pursuit may be brought together; and to preserve intact this important and rapidly-extending interest from the injurious effects of the machinations of those whose only object is gain, they care not at whose cost. There is something very feasible, and we think promising, in the scheme; it would, as proposed, by no means clash with the Mining Exchange, while it would open a field for information on mining subjects which can scarcely at present be obtained, or when obtained, relied upon. We must, however, refer our readers to the document itself, which will, most probably, elicit some expression of opinions on the subject, and future discussion.

The extraordinary results of the investigations into the electric properties of matter, and the chemical discoveries of the first portion of the nineteenth century, so far from appeasing the scientific appetite, has engendered a powerful and searching spirit of inquiry, which will not be satisfied until the whole mysterious arcana of Nature is opened to our view; and from the new and powerful appliances which science is daily offering us, it is highly probable, that as regards the number of elementary bodies, of which all substances in nature are composed, a great revolution will be effected on all our pre-conceived notions of natural philosophy. Many scientific men, both in Europe and America, whose faith has begun to be shaken as to the existence of between fifty and sixty simple substances, or elementary bodies, are pursuing experiments with a view to obtain more certain knowledge of the operations of Nature in her great hidden laboratories; and an opinion appears rapidly to be gaining ground that most of these so-called elements, particularly the metals, are compounds of other real elements, which probably are few in number. Our respected correspondent, Mr. S. B. ROGERS, of Nantyglo, promulgated this idea as long since as 1821, and in April, 1844, we published in the *MINING JOURNAL* a series of three letters, as an introduction to a "New Theory of Nature," communicated by that gentleman,—whose "Data for the Use of Blast Furnace Managers," published also in the *Journal*, has been so well appreciated by the profession. As new ideas, tending in the same direction, are daily being propounded, it is but justice that an original author should have the merit either for the discovery, or the imagining, the existence of any new truths; and on this ground we willingly acquiesce with the author's desire, and re-publish the letters in question, the first of which appears in another column. At the time when these communications appeared, the theory received little attention, and we must confess we ourselves did not feel much inclination to support the principles assumed. A change, however, has come over the aspect of the whole system of the philosophic world; and the mind is somewhat prepared for any discovery, however astounding, even should it be the reduction of the simple elements to a much less number, or even to two only, as assumed by the author of the theory under notice.

On Thursday last, the first open meeting of the ANGLO-CALIFORNIAN GOLD MINING ASSOCIATION was held (an account of which will be found in another column), and this we hail as a new era in the history of the company. It appears that shortly after the discovery of gold in California, an individual, yclept LUKE WILLIAMS, concocted or promoted this association, as the case may be: with an industry worthy a better cause, he journeyed north, south, east, and west, even penetrated to the district of poetry—the Lakes of Windermere and the Valley of Rydal, to obtain partners in his Eldorado, at the rate of 10*s.* per share paid up, or less when the funds were wanting. Associated with him was a Mr. PALMER, and an individual rejoicing in the ancient and time-honoured Cornish name of TREMAINE. They were abroad, he was here. His first prospectus gave a list of directors, none of whom are now in the company. The funds were raised; a gallant knight was sent out to the locality, who on arrival at the scene of his labours found Mr. PALMER was either a myth or a rogue, and that the sketch of the property which had been circulated in the provinces only existed in the imagination of the artist who drew it. In June, 1850, fresh directors came into the association; a baronet was appointed director, and some legal gentlemen became his colleagues. These directly saw that all was not right, and, therefore, determined to place the whole concern, if not on a secure and solid basis, at least to make it a legally constituted body. Their mode of acting did not suit the managing director: as they were the strongest party, he was expelled from the board.

Whether this was right or wrong is not in our province to determine; but forthwith he presents to the shareholders a "vituperative pamphlet," accusing himself of malversation, and abusing them; descending so low in its details as to attack the appointment of an honest secretary, who from his previous position was aware of the manner in which the company had first been concocted. The provincials had been tried to the utmost; the

present directors refused to organise a small party of Londoners (query, would they have been so green as the provincials), or to advertise in London to augment the finances, so as to blind some of the cunning people as to the real state of affairs, *hinc illæ lacrymæ*. A counter statement was put forward by the present directors. Both are now before us; we give no judgment on either,—let them stand on their merits or demerits.

We regret much that Mr. WILLIAMS was not present at the meeting to disprove the allegations against him, or confound his opponents with proofs of the assertions which he brings against them. In our opinion the explanation of Mr. MASSEY DAWSON was most conclusive and damatory to him, and such seemed to be the feeling of the majority there assembled. We make no further remarks, but this we can say from experience—that during the sway of Mr. LUKE WILLIAMS all explanation was difficult to be had; while under the present regime, every information can be obtained by those who require it.

The existence of gold in New South Wales, and the excitement which prevails in the district around Bathurst, as stated in last week's *MINING JOURNAL*, is, to a certain extent, confirmed by advices received from Sydney, to May 26th, by the *Teviot*, which arrived at Southampton on Wednesday morning last, having brought the despatches of the *Thomas Arbuthnot*, which had put in at Pernambuco. The sum of the information is, that there is gold, but great uncertainty and difficulty in getting it. Some of the population are said to be half mad with joy; others in despair, anticipating famine, disease, and death. In the search for gold, a large deposit of rock-salt has been discovered. It is said that a company, formed for working for gold, under the auspices of a member of council, had averaged an ounce per man per day; and that three apprentices, who ran away from Bathurst, returned in a few days with 17 ounces, which they sold for 51*l*. Pieces of gold, of various sizes, were spoken of as having been found, from 1 up to 9 ounces; one piece 4½ lbs. in weight; and numerous instances are given of individuals realising in a few days from 50*l*. to 170*l*., while many were making regularly from 20*l*. to 40*l*. per week. Provisions were getting awfully dear at the diggings, and, consequently, much distress prevailed. The existence of gold in considerable quantities may now be considered as a great fact: it is stated that 20,000*l*. worth had been obtained, and that sales had taken place to the extent of 9000*l*. in Sydney in a few days; and in searching for gold, valuable rubies had been found in the River Manning. The great question is, what effect this discovery will have upon society in this colony, should gold exist in sufficient quantities to give permanent existence to that spirit of enterprise which is ever engendered when it appears easy to acquire wealth by the mere picking it up. It will give a strong impetus to the tide of emigration to our Australian colonies, and tend to a more rapid peopling of the islands of the South Pacific Ocean with the Anglo-Saxon race, which has already belted the vast continent of America, from the latter to the shores of the Atlantic. We fear, however, that like the earlier period of the discovery of the precious metal in California, it will lure the very worst of characters to the soil, and instil immorality, insubordination, and crime, into the population. The military of the district have been ordered to the diggings to enforce submission to law and order; but it is gratifying to learn that so far the parties who have located on the diggings are peaceable and orderly, and generally agree in reproaching the bringing of fire-arms among them. We have received private confirmation of this state of things, and of the agitation which exists, from an eminent mineral surveyor, who has made himself well acquainted with the locality after a three years' residence; and it is probable a rich field will shortly be opened there for the employment of British capital, and being our own territory, under the wholesome control of English law, without those risks and dangers which attend the researches for the precious metals in California. However plentiful gold may be, it is, under any circumstances, hard and destructive work to individuals; while a company, going legitimately to work, securing supplies of provisions and necessities on the spot, obtain it with comparative ease and facility.

MANUFACTURE OF IRON IN INDIA.

We have on two or three occasions noticed in the *Mining Journal* the formation and progress of a company under the title of THE EAST INDIAN IRON COMPANY, with the object of manufacturing iron from the rich ores of the southern portion of that peninsula, our remarks being of a favourable and commendatory character, convinced as we are of the capacity of India to produce iron in any quantity, and of the excellence of the material, even as rudely manufactured by the natives. Our attention has again been called to the subject from some correspondence which has recently taken place in the *Times*, referring to the specimens of iron, the production of the Indian Iron and Steel Company, now open for public inspection in the Great Exhibition; and although the first notice of these specimens by the writer was decidedly favourable, he appears to have laboured under a misconception on more than one point as to the value to be attached to the establishment, on a large scale, of the manufacture of iron in India. As the cost and quality of fuel is the most important item in the production of metallic iron we shall notice that point first, as it appears to be implied that as charcoal is employed the price must be greatly enhanced, in a similar ratio as charcoal iron is charged here, much higher than that manufactured from coke or coals. The cases, however, are totally dissimilar; the almost inexhaustible forests and jungle of India supply material for the production of most superior charcoal, and the extraordinary low price of native labour, which may be had for 2½*d*. per man per day, renders its cost as low, or even lower, than the manufacture of coke in this country; while the very superior quality of the iron (ranking with Swedish and Russian) entitles it to a price far more remunerative, as on reference to our metal price list for this day, Indian charcoal pig-iron will be found quoted at 5*l*. 10*s*. per ton, at which price a parcel of about 100 tons found a ready sale, some three weeks back, immediately on its arrival in this country. This, we understand, will be followed by regular consignments as the works at Berypore and Porto Novo, from which this iron comes, are placed upon a more regular and permanent footing under the auspices of the new company, who are only awaiting a Charter from Government to enable them to prosecute vigorously the undertaking. With respect to the quality and character of the specimens exhibited, we also think justice has not been done; from the rough pig to the highly-finished steel articles, these specimens are somewhat extraordinary in their way, and quite equal to the production of this or other European countries. The toughness of the iron is exemplified in the twisted and contorted piece of round bar, which well shows the quality of the fibre, and the excellence of the steel is shown in the various articles of cutlery, bar-steel, springs, &c.

A highly-important feature, as showing the connection of this company as the pioneer of the iron manufacture in India, with the advancement of the country and the development of its resources, is the influence it will have on the formation and extension of railways, and their corresponding effect on trade and commerce; and we are happy to find that already a contract has been entered into to furnish one of the railway companies, whose works are now progressing, with a portion of the chairs which will be required on the line. This is a good beginning, which there is little doubt will be followed up by more extensive operations—not only in chairs, but all the other iron material necessary in railway construction, and at least lowering the cost of their formation by the amount of freight between England and India. The territories secured by the company are situated in the presidency of Madras, yielding ore and fuel to an extent which, for all practical purposes, may be termed inexhaustible. Their accessibility and quality are also such as to afford the means and materials for making the finest iron at the lowest cost. The properties comprise extensive tracts of ore grounds and forests acquired from native landholders, with exclusive rights from the Madras Government for raising rich magnetic ores throughout all the provinces of that presidency where they are found, and leases of the Government forests best situated to their purposes. The quantity of iron exported in 1850 to India, from London and Liverpool alone, exceeded 55,000 tons; and when the present increasing demand and certain future wants are considered, it appears to us that, under thoroughly efficient management, there is no mercantile undertaking of the present day which holds out such great and undoubted prospects of success.

IMPROVEMENTS IN THE LOCOMOTIVE ENGINE.

The locomotive engine, which may perhaps be considered the masterpiece of mechanical engineering, notwithstanding its great powers, and the vast influence it has had on the progress of trade and commerce and the destiny of the human family, possesses many inherent disadvantages, which have been appreciated from its first introduction. These are its enormous working expenses, crushing weight, whereby the iron road is continually being injured and required to be repaired; the large proportion of the power it engenders being required to move its own weight, with various others. Many patents have been secured for so-called improvements, some of which have, doubtless, been effective; but much yet remains to render it a profitable, really scientific, and well-working machine. Among the latest attempts to get rid of some of the disadvantages above mentioned, we notice a locomotive engine patented and constructed by Mr. Charles Ritchie, engineer, of Hackney, who appears to have boldly grappled with the subject, and has produced a machine, which while its cost will be about two-thirds of the engines at present usually made, its weight is one-third less, with a greater hold on the rail, and is calculated to afford more efficient working at much less cost of transit. Indeed, there must be something evidently meritorious in its design and construction, as the London and North-Western Railway Company contemplate testing its capabilities, it having been especially recommended to their notice.

The principal feature in which this engine differs from others is, the centre of gravity being much lower than it can be made by any other plan now in use, yet any optional diameter of wheels may be applied. By this arrangement, and the method of applying the power, the tendency to an oscillating motion is neutralised, and all angular straining, so hurtful to the durability of the engine, is avoided. Two pairs of driving-wheels are employed, one pair at each end, which bear the weight, and they are coupled by piston rods from their two pistons, working in one cylinder between, on each side of the engine. This method secures the greatest possible tractive adhesion on the rails, and also prevents buoyancy, or a tendency to mount the rail. The boiler is of an unusually simple and strong construction, with large heating surface and efficient draught, effecting an economy of fuel; the fluctuation of the water surface is prevented by a transverse partition, which also greatly strengthens the boiler. Every wheel is protected by a guard, or safety break, in such manner as to prevent almost the possibility of the engine being thrown off the rails; should even all the axles break, the progress of the train would be merely retarded. The safety valve has a self-relieving principle, which renders explosion next to impossible, and it is out of reach of all intended or accidental injury. There is also an exceedingly simple self-acting and self-regulating apparatus for feeding the boiler, so constructed that either deficiency or redundancy of water are alike impossible. The engine, too, is freed from the usual cumbersome pumping gear, and the valve gear is unusually simple. Upon the whole, in the absence of means of securing real efficiency and economy, by working the steam expansively, this engine appears to come nearer railway requirement than anything we have yet seen, and we hope shortly to be able to lay before our readers most successful results of the proposed experiments. Most of these improvements are intended to apply to other engines, as well as to locomotives.

PATENT WATER-BALLAST AND IMPROVED BILGE PUMP.

In our last *Journal* we briefly referred to the water-ballast apparatus, patented by Dr. White, of Newcastle-upon-Tyne, stating that the collier brig, *Benton*, which was fitted with it, had completely established the fact that the operations were successful, of efficiency, safety, and great economy in its use; and we now proceed to lay before our readers a description of the methods which the patentee has adopted for the employment of water as ballast, in lieu of the usual materials. The water is contained in bags secured in the bottom of the hold, of which there may be four, six, or eight, of 6, 8, 10, or 12 tons each, according to the requirements or trim of the vessel. They consist of waterproof canvas, and are united by hose pipes, a main hose being laid down in the angle of the keelson and ceiling, and over it is slid a hose board, which supports the bag and prevents the hose from being crushed. The bag hose is united with the main hose by couplings, always at the command of the operators, and when the hose are connected, and the valve opened, the water rushes in until the bags are full. A main band, by compressing the bags, allows of water being safely admitted, or discharged, even in a storm. For the discharge of the water, Dr. White has patented a pump, which is also effective for general ship's use, and, instead of raising the water over the side of the deck, only has to work up to a level of the outside water—the great economy which this arrangement secured is shown by what now takes place in the *Benton*. From the level of the well to the level of the outside water, when in ballast, is 6½ ft.; laden, 11 ft.; to deck, 16½ ft. By this plan one-third of the power is saved when adened, and in discharging ballast the proportion between the new and old pump is as 1 to 2½, and the force required to raise 50 tons in one case would be equal to 125 tons in the other. When ships can lie on shore, the water may be discharged through the hose by the pipe without any pumping at all. The bags are enveloped in a case of banded tarpauling, prepared with materials that vermin shun, such absolutely leaving the vessel: they are never seen, and exposed to no contingency; they have only to take in and let out the water, and will probably last as long as the ships themselves; the cases may require renewal, but they cost but little. When more than ballast is or may be required, stowing bags are recommended. They are lined with gutta serena cloth, furnished by the company, so prepared as to be capable of carrying wine, oil, &c., without communicating either taste or smell—a trial has been made for 16 months. On some coasts, where the difficulties of obtaining ballast are so great, the advantages in general commerce must be obvious. They are easily packed, and three or four can be put little in a ship. By using this apparatus, ballast may be increased or diminished with the greatest facility, and, consequently, more canvas carried. In 20 minutes ballast may be taken in, while going down the stream. Shouls may be passed over, and the danger of a beach avoided, or, indeed, in extremity the shore may be even run upon, from the certainty that the lightening of the ballast will float the vessel off again when the danger has passed away. Capt. Blackett (the master of the *Benton*), from his experience with the apparatus, asserts that the results have satisfactorily proved to him that the bags are most efficient, and that they have unquestionably demonstrated the practicability of water-ballast. The subject is one of immense importance to shipowners, as affecting time and money; and it appears to bear out what the patentee claims for it—safety, cleanliness, and an economy of time, labour, and expense.

STEAM-SHIPS FROM LIVERPOOL TO CALIFORNIA.—It is said that a line of steam communication between Liverpool and San Francisco, by the Nicaragua route, has been arranged, and that the steam-ship, *Northern Light*, is to sail from that port to New York. The line will then be carried on to San Juan by the steamers *Prometheus* and *Daniel Webster*, and a new steamer has been contracted for to run on Lake Nicaragua. It is expected that the European passengers will avail themselves of this route to San Francisco, and efforts are making to secure the conveyance by it of the gold dust for England.

THE ELECTRIC TELEGRAPH.—The extension of the wires from the central station at Louthbury to Lloyd's has just been completed, thereby placing the underwriters' room in immediate communication with Hull, Holyhead, Liverpool, and all the principal outposts, and shortly, when the telegraph now in progress over the Great Western is completed, with Plymouth, the Bristol Channel, and the Land's End.

THE TRUCK SYSTEM OF SOUTH STAFFORDSHIRE.—A few days since it was discovered that John Septimus Marygold, "tommy shop-man," had absconded, taking with him a large sum of money belonging to different individuals. This Marygold, it will be remembered, is the man who figured a few months ago so conspicuously in the Wolverhampton Police Court, in the prosecution under the Truck Act, against the Messrs. Cresswell, of Tipton, as the individual who supplied the men with goods, allowing the Messrs. Cresswell a percentage on the goods supplied. In addition to his connection with the Messrs. Cresswell as above, he had lately entered into arrangement with the Messrs. Furley, of Cosley's Furnaces, to supply their workpeople on the same principle. It was not generally known till the Saturday Marygold had absconded; and when the poor men's wives went for their next week's provisions they found the tommy shop shut up against them, and it is reported that many of their families, in consequence, were without a dinner on the Sunday. A reward of 50*l*. has been offered for his apprehension, and a warrant has been issued against him, and placed in the hands of the chief constable of the borough of Wolverhampton, charging him with obtaining goods under false pretences. It is supposed he is accompanied by his wife, who is described as a pretty-looking woman, about 5 feet 4 inches in height.

A general strike has taken place within the last fortnight among the horse nail forgers of Dudley and Stourbridge.

MINING ENTERPRISE—ITS PROGRESS AND PROSPECTS.

Having shown in our last *Journal* the favourable position the mines upon our dividend list stand in at the present moment, with the prospective advantages expected to be derived from them for a considerable time to come, we now proceed to our second, and almost endless, list of mines, that every week brings some new additions to, among which, doubtless, there are many that are wholly worthless, notwithstanding the premiums annexed to them; and we invite the assistance of all our readers, that they may be crushed while yet in the bud. We have long been aware that the said list wanted, not only the pruning knife, but wholesale weeding; and, as hinted in our last, we had hoped this leviathan task would have been partly attained ere this, through the means of the Mining Exchange. One stride in advance of this formidable task was made last week, and our Share List then underwent the scrutiny of several eyes and hands that had hitherto shown an apathy towards it. It has the promise of such aid for the future, by which powerful assistance we hope to be enabled to submit as full, true, particular, and as correct a list as can possibly be expected or made.

Our second list numbers 304 mines that have paid no dividends, and the greater part have yielded so trifling a portion of metallic ore, as not to be registered among our weekly or quarterly account sales of mining produce. In fact, out of the 304 mines, it will be found, by referring to our paper of the 5th July, that only 33 of them sold any copper for the previous quarter, say 1 in 9½, and—

| | | |
|-----------------|-------|-------------|
| 8 of them under | ..... | £ 90 worth. |
| 7 " | ..... | 150 " |
| 4 " | ..... | 200 " |
| 3 " | ..... | 250 " |
| 1 " | ..... | 350 " |

Say, 23 out of 33, whose quarterly produce is under 350*l*.

The Phoenix Mines sold 278 tons for 3357*l*. 18*s*., being an average of 12*l*. 1*s*. 6*d*. per ton, and this is the first mine out of all the 33 that is likely to pay dividends, if it has not already done so. Our receipt of intelligence from thence has hitherto been very bare, and we hope this notice may induce the parties interested to send us a copy of their account-day statements and reports for publication, the same as most other mines are in the habit of doing. We have, in fact, been applied to for information by several parties, and cannot supply it.

Marke Valley Mine sold 603 tons, for 2525*l*. 6*s*. 6*d*., an average of only 3*l*. 14*s*. 8*d*. per ton. This mine has been at work 12 years, in 6000 shares, of 10*l*. each; paid up, present price about 2*l*. 5*s*. The low quality of the ore does not promise well towards removing this concern, after its long struggle, where we could wish to see it—viz.: among our dividend mine shares. The lode in the 84 west is split up by an elvan course; the stratum under is killas. Eastward the lode is 10 ft. big—capel and spar, mundie and copper; a winze below this yields 4 tons of copper ore per fathom for the breadth of the winze. The lode is 10 ft. big in the 65, and yielding 4 tons of copper ore per fm. The two stopes are turning out 8 and 12 tons. In the midway level east the lode is 12 ft. wide, 9 tons per fm. The stopes in the back 8 tons; bottom 6 tons.

Wheal Agar sold 274 tons for 1827*l*. 7*s*. 6*d*., or 6*l*. 13*s*. 4*d*. per ton. This mine, situate immediately adjoining North Pool to the south, East Pool to the north, and East Wheal Crofty on the east, continues struggling on after 10 years' exploring, with no profit to the shareholders, who appear to have advanced 6000*l*. on 1000 shares, of 6*l*. each. They have recently added the sett of Wheal Tebidi on the east, and are driving their levels into it in promising ground, but as yet they have not met with neighbour's fare, or cut a course of ore equal to their more successful friends to the right and left, which in such a locality is the more extraordinary. That they deserve to participate, is shown by their steady perseverance to meet it, and we hope they will ultimately be well rewarded.

West Wheal Treasury sold 244 tons for 1581*l*. 18*s*. 6*d*., average 6*l*. 9*s*. 8*d*. per ton. This concern, like the preceding, has been struggling on for a series of years, incurring an outlay of about 9000*l*., and never arriving beyond the state of "kindly" and promising. That state is of the most doubtful gender in all the mining vocabulary: parties never like to stop when that flattering sound reaches their ears; but too often, alas! it is "hope told a flattering tale." They go on quarter after quarter, and year after year, till machinery or pit-work want permanent repair, or the water is in, and it is found too costly to draw it out: sometimes a drop in the standard is the cause, and then the concern is abandoned. We beg it to be understood these remarks are not particularly directed to this mine; on the contrary, we wish them, and the adventurers generally, who persevere as they have done, to be well rewarded, and shall gladly hail the day that crowns them with deserved success. We hope the treasure is near discovery, and that the present holders may participate in its distribution.

Polberro Consols (St. Agnes) sold during the quarter 325 tons of copper ore, amounting to 956*l*. 19*s*., only 2*l*. 18*s*. 10*d*. per ton; and 52 tons 17½ cwt. tin for 2501*l*. 19*s*. 2*d*. This concern is situate in the Royal Duchy of Cornwall, and not long since was wrought by them: for a vast number of years it was one of the most productive tin mines in the county. Some years ago, when the price of tin was low, and the machinery not in the best order, the system of "digging the eyes out," and "taking away the nest egg," was resorted to, by which means the mines were so worked out of order that it has taken a considerable period of time, and a vast amount of money, to place them in the position they are at present stand; and that is not very flattering, for it is understood they are not quite paying cost; we wish they were, and should be better pleased could we see them upon our dividend-paying Share List. That they may arrive there shortly is our sincere wish.

West Wheal Seton sold 180 tons copper ore for 788*l*. 11*s*. 6*d*., or 4*l*. 7*s*. 8*d*. per ton. The spirited adventurers in this concern (comparatively few) have, inspired with the hope of participating in the success of their immediate neighbour on the east, Wheal Seton, boldly contributed 71*l*. per share, to give it a fair trial; and as they are duly possessed of all the best attributes for mining purposes—viz., patience, perseverance, and capital, and by experience know the length of time it took to bring the Great Wheal Seton to a profit, and how shortly afterwards they received back the whole of their outlay, they will, beyond a doubt, still patiently persevere in judiciously expending such further capital as may be requisite, and ultimately receive the reward. We anticipate at an early day having to place this concern among the list of dividend-paying mines.

West Fowey Consols sold 122 tons of copper ore for 740*l*. 11*s*., average 6*l*. 16*s*. per ton during the quarter, which is better than they had been doing; still the ore sold since is of less average value, which, in the absence of intelligence from head quarters, leads us to doubt that they are as yet deriving any profit.

West Wheal Jewel during the quarter only disposed of 118 tons of copper ore, value 605*l*. 4*s*., average 5*l*. 2*s*. 7*d*. per ton, the chief support of the concern being from tin, which they sell to the smelters by private contract, and both united have hitherto left the shareholders without a dividend: 3715 shares have responded to calls, amounting altogether to 12*l*. each—say, 44,580*l*.; but 6000 were the original number, the difference being forfeited shares, on which a considerable amount had been paid, the outlay of this working having been about 55,000*l*. Preference shares are being issued at 30*s*. each, for the purpose of working the north mine, the present operations having been confined to the south, and the opinion seems very generally to be entertained that the north part will one day prove a most profitable spot, and be as productive as the same lodes were in Wheal Jewel and the ground eastward; while many miners of undoubted talent are of opinion the ore will make away westward, towards, at, and beyond the great cross-course and slide, between which, and on parallel lodes, immense fortunes were realised.

Poldice Mine has ever been strictly a private concern, carried on by a few opulent individuals, in 64 shares, quietly pursuing the even tenor of their way, rich or poor, they alone feeling the effect or benefit thereof. It has been a wonderfully productive mine for both tin and copper, lying to the north of the Great Consolidated, and in the vicinity of the deepest and most extensively wrought mines in the county of Cornwall, or any other part of the United Kingdom. When all around were in full course of working, about 18 or 20 years ago, the number of engines drawing water and stuff exceeded anything of a similar nature in any part of the world. The consumption of coal alone was immense, and yet mining labourers were plenty. These great concerns seldom had to complain of the want of dressing power—maidens or boys, though the tonnage of ore was thousands weekly. We were amused, a few weeks back, at noticing, in a little concern close by, that "dressing operations had not progressed well, many of the hands having been absent," and this continued for three weeks. When the sampling took place it amounted to little more than 40 tons.

We wish we could impress generally on the minds of all those agents who

have reports to write to be more concise; a vast deal of nonsense would thereby be avoided. They might take a lesson from those written by the agents of more extensive concerns, and by omitting puffy paragraphs (which do more harm than good) they would ensure the perusal of what they communicate, which, in a variety of cases we could particularise, is not the case, wholly owing to neglect of the hint thus given.

[To be continued in next week's Mining Journal.]

Original Correspondence.

MINING IN MEXICO—EXTRAORDINARY SUCCESS.

Sir,—The following account of the mines around Santa Fe de Guanajuato may be interesting to the numerous readers of your influential Journal; I, therefore, forward it for insertion, should you deem it worthy of a space.

The city of Santa Fe de Guanajuato (or, as it is sometimes written and pronounced, Gonnajonto) is the Villa Rica of Mexico, being placed in the very heart of its richest group of silver mines, on the porphyritic range of the Sierra de Santa Rosa. (Humboldt gives the latitude $21^{\circ} 9'$ north, longitude 100° west.) It is one of the most singularly situated cities in the world. One might imagine that the jealous spirit of the miner had chosen this labyrinth of mountain ravines as his capital, for the purpose at once of security and concealment; and the extraordinary shapes assumed by the gigantic masses of porphyry have frequently the appearance of ruined walls and bastions.

The city of Guanajuato was founded by the Spaniards in 1545; it was constituted a town in 1619, and invested with the privileges of a city in 1741. The first mine worked, that of San Barnabe, five leagues from the city, was begun in 1548, 28 years after the death of Montezuma. In 1758 the mines of Meblado and Rayas were opened on the great vein (*veta madre*); but for a considerable time the mines of Guanajuato attracted little notice, and they were almost abandoned during the 17th and 18th centuries. It is not above 50 years that they have become so famous. They are now esteemed richer than those of either Pachuca, Zacatecas, or Bolanos, and their produce has been almost double that of Potosi. In 38 years—viz. from 1766 to 1803—the mines of Guanajuato produced gold and silver to the value of 165,000,000 piastres, or 12,720,061 lbs. troy, the annual average produce being 556,000 mares of silver, or 364,911 lbs. troy, and from 1500 to 1600 mares of gold. (Humboldt states that the *veta madre* of Guanajuato has yielded more than a fourth part of the silver of Mexico, and a sixth part of the produce of all America.) All the veins of Hungary and Transylvania together yield only 85,000 mares of silver. The mother vein (*veta madre*) of the Sierra de Santa Rosa extends in a direction from south-east to north-west, rather more than five leagues, which, before the revolution, were yielding 10,000 mule-loads of ore, of 11 arrobas (275 lbs.) each, every week. In 1803 there were employed on the works 5000 workmen, 1896 grinding-mills, and 14,618 mules. "The Valenciana," says Humboldt, "is almost the sole example of a mine which, for 40 years, has never yielded less to its proprietors than from 2,000,000 fr. to 3,000,000 fr. annual profit" (from 80,000 to 120,000). It appears that part of the vein extending from Tepeyac to the north-west had not been wrought towards the end of the 16th century. From that period the whole tract remained forsaken till 1760, when a Spaniard, who went to America very young, began to work this vein in one of the points which had till that time been believed to be destitute of metals. M. Obregon (that was the name of the Spaniard) was without fortune, but as he had the reputation of being a worthy man, he found friends, who from time to time advanced him small sums to carry on his operations. In 1766 the works were already 260 feet in depth, and yet the expenses greatly surpassed the value of the metallic produce. With a passion for mining, M. Obregon preferred submitting to every sort of privation to abandoning his undertaking. In 1767 he entered into partnership with a petty merchant of Rayas, named Otero. Could he then hope that, in the space of a few years, he and his friend would become the richest individuals in Mexico—perhaps in the whole world? In 1768 they began to extract a very considerable quantity of silver from the mine of Valenciana. In proportion as the shafts went deeper they approached the depositary of the great metallic wealth of Guanajuato. In 1771 they drew from the Pertinencia de Dolores enormous masses of sulphuret of silver, mixed with native and red silver. From that period, till 1804, the mine of Valenciana has continued to yield annually a produce of nearly 600,000 sterling. There have been years so productive, that the net profit of the two proprietors of the mine has amounted to the sum of 250,000. M. Obregon, better known by his title of Count de la Valenciana, preserved, in the midst of immense wealth, the same simplicity of manner, and the same frankness of character, by which he was distinguished previously to his success. When he began to work the vein of Guanajuato above the ravine of San Xavier, goats were feeding on the very hill which, 10 years afterwards, was covered with a town of 7000 or 8000 inhabitants. During the last 25 years of the Count de la Valenciana's life his annual revenue from his mine was never below from 80,000 to 125,000, per annum.

Here, then, is the history of a man who was the proprietor of the mine of Valenciana, situated in Guanajuato, where the United Mexican Mining Company have their mines; and from advices received by that company but two days ago, dated Guanajuato, 28th July last, they may hope, by perseverance, in their mine of Jesus Maria y Jose, their efforts will be crowned with similar success to that of the Count de la Valenciana.

London, Sept. 11.

A. Z.

CALLOW'S PATENT BLASTING POWDER.

Sir,—In answer to a letter in your Journal of the 6th inst. from Mr. Copeland, I take the liberty to request your insertion of the following observations upon that gentleman's apparently angry remarks. It was never my intention to provoke an antagonistic feeling in any person who might look upon me as a competitor. It would be perfectly useless, after my notice to you in my three last letters of the 2d, 16th, and 30th August, to enter into a discussion on the properties and peculiar capabilities of my powder; for, so soon as I am fully prepared, I shall follow out the promised opportunity of putting all interested and necessary inquiries at rest. I would observe, for the satisfaction of Mr. Copeland, that I was not aware the letter signed "G. C." was from the pen of that gentleman; and as I have no wish to contend for any "victory," I shall avoid further notice of any remarks until my experiments shall justify my assertions.

Dartford, Sept. 11.

EDWARD CALLOW.

BAROMETERS FOR COAL MINES.

Sir,—I have read with much interest Mr. Gurney's lucid description of his differential barometer, and heartily wish that his suggestions as to its use in coal mines may be attended to with that zeal which they deserve. Knowing what I do of the prejudice that must be overcome before anything new can be permitted to succeed, I have my fears for this very ingenious contrivance. I have for many years occasionally made for myself and friends barometers of the most simple construction, with an improved index, whereby the changes of atmospheric pressure are more distinctly seen than by the barometer in common use.

The apparatus is so simple that it is fully within the capability of many of the pitmen, and more especially of the enginewrights to make for themselves, which if they can be induced to do, I believe they will better understand the principle, and be more interested in its application than if even a superior instrument were presented a free gift.

The construction of the apparatus is as follows—viz. a straight glass tube, about $\frac{1}{2}$ in. inside diameter, 35 in. long, and hermetically closed at one end. A basin or cup for the mercury of alder, beech, or any white wood, impervious to mercury, inside dimensions 5 in. long, 2 in. wide, and 1 in. deep. In the middle of this cup a groove is made lengthways, wide enough to admit easily the middle finger of the operator, whilst it is pressed against the open end of the tube when filled with mercury. The cup is attached to a board about 6 $\frac{1}{2}$ in. wide and 3 ft. 6 in. high, with wooden screws, taking care that they do not touch the mercury in the cup. The board will serve to support the tubes in a perpendicular position, and become the back of a case, to preserve it from dust and injury. The place at the end of the groove where the tube will stand should be so narrowed as to keep the tube from reaching the bottom, that there may be free passage for the mercury in and out. The cup is made thus capacious to receive all the mercury in the event of a fracture or minor accident. Things thus prepared, the operator may put the tube into its place before it is filled, to prove that all is right. A slight deal rod should be prepared, a few inches longer than the tube, with a piece of clean wash leather fastened at the end. This will first serve to clean the tube, and when the mercury is poured into it to aid in expelling the bubbles of air, which is ultimately

done by filling the tube quite full of mercury, when the operator, placing his middle finger firmly on the end of the tube, turns it with the close end up, and places the lower end (yet closed with his finger) into a cup of mercury. On removing the finger the mercury in the tube will fall, and form a vacuum at the upper end; and bubbles of air will be seen to expand, and cling to the inside of the tube. To get rid of them, again close the end of the tube with the finger, and turn it with the open end up, when the vacuum will press against the finger, which remove, and again fill the tube quite full, and with the finger again applied repeat the operation until the air bubbles disappear.

The tube may now be carefully put into its place, stayed against the board, and a clamp fixed against the upper end of the tube to prevent its being inadvertently drawn up. The height of the mercurial column, measuring perpendicularly from the surface of the mercury in the cup to that in the tube, expresses accurately the statical pressure of the atmosphere at the time; and being marked on the board, will point out the particular height for the scale of inches, subdivided into tenths, which may afterwards be applied.

I will now endeavour to describe the improved index. It consists of a piece of strong white drawing-paper, surrounding the glass tube, and easily moveable up and down upon it. The side of the paper next to the observer, is cut to a well-defined edge, inclining about 15° or 20° from level. It is convenient that this edge be marked by perpendicular lines with a scale of equal parts in each direction, from a line meeting the middle point of the inclined edge; and on the opposite and inner side, a thick black mark should be made, the lower edge of which should be level with the middle point of the inclined edge above referred to. (This black mark should be $\frac{1}{2}$ or $\frac{3}{4}$ an inch deep, and the blacker the better. It must also be on the side of the paper next to the tube, that it may be seen.)

Having thus an index on both sides of the tube, simultaneously moveable, it can with great accuracy be adjusted so as to place the apex of the mercury in the same line with the two indices, so that on looking through the tube, the point where the perpendicular centre line on the index meets the inclined edge, the apex of the mercury, and the under side of the black mark on the inside of the paper, on the opposite side of the tube, may be in line with one another.

After which, if the mercury falls, a small streak of white will be seen under the black mark. And if the mercury has risen, the eye or the line of vision must rise a little above the middle point of the inclined edge. By the double index, applied to a barometer tube of 6-10 inch inside diameter, a change of atmospheric pressure, of 1-500 of an inch of mercury, is easily discernible.—W. BRUNTON: Camborne, Sept. 8.

ON THE REAL NATURAL LAWS OF PHYSICS.

Sir,—As new ideas appear to be bursting into life from several quarters relative to the "Elements of Nature," permit me to ask the favour of your again inserting in the columns of your scientific and wide-spreading Journal my letters on that subject, which were originally written about the year 1821. In the *Mining Journal* of Saturday last it is said, in a communication from Capt. Matthew Francis, that "M. Dumas has announced his intention of again going into the question of the elements of metals; and Professor Arago is said to be pleased with the deductions on which the former deems such an inquiry desirable." Now, as I feel confident that a time will come when what are now termed "elementary bodies" will be found to be composed of two distinct things only, I hope you will do me the favour of publicly recording my views on the subject, and my reasons for entertaining them, which views and reasons I did, in a former Journal, and do now, respectfully call upon those scientific persons who have leisure, power, and ability, to fairly investigate, and, if possible, put at rest, if not by a qualified admission, at least by a rational, and, consequently, scientific denial or refutation.—S. B. ROGERS: Nantyglo, Aug. 20.

NEW THEORY OF NATURE—(A REPRINT.)

Sir,—Hitherto I beg to transmit you the first Number of "A New Theory of Nature," which will show, beyond all rational contradiction, that what, in philosophical language, are termed elementary bodies, are, in reality, not so, but compounds of two things only!—and I shall endeavour to make it appear, in this series of letters, that with these two things everything within the range of the human mind may be, and has been, produced, and that in a similar manner to the production of well-known compounds on the atomic system of modern philosophy.

A due and scientific application of this theory will, I confidently believe, lead to the clear elucidation of many things which, at present, are termed rank impossibilities. Among other extraordinary powers with which it will arm mankind, the means of realising the following very important results may be named as a few of them—viz.:

1. The production and control of "fire, air, and water," to a comparatively unlimited extent; and, consequently, unlimited power for all physical purposes would then be placed under the entire command of rational mankind.

2. Metals may be formed or transmuted, and all chemical compounds produced, with ease and facility, to any extent, and with materials now entirely valueless.

3. Vegetation may be stimulated, and the fruits of the earth wonderfully increased and perfected, in all climates, from the burning sands of the tropical regions, to the desolate and ice-bound deserts of the poles.

4. The tenants of the air, the earth, and the waters, may be augmented in number beyond the powers of arithmetic to describe; and their powers, properties, and materials, regulated and made completely subservient to the will and pleasure of civilized man.

5. Detonating and projecting compounds may be formed that would, in a manner, blow the earth to atoms, were it possible to operate in a mine, of comparatively small dimensions, in the centre of the globe.

The new theory of natural things I will freely acknowledge to be at present very crude and imperfect—as well from the difficulty of finding words adequate to convey a right and true view of new things and new processes, to minds enthralled, as it were, by preconceptions of what is termed philosophy, as from the very extensive and complicated nature of the theory itself. Time, however, will mature all things, and a little fair discussion on this subject, in your scientific and well-conducted Journal, will, I have no doubt, lead to results equally as important, as brilliant, as useful, and as astonishing, as any of the wonders that have been realised in modern days, by the powers of steam, the combinations in mechanism, or the discoveries in chemistry.

Nantyglo, April 2, 1844.

ON THE REAL ELEMENTS OF NATURE—INTRODUCTION. No. I.

Nothing facilitates the acquiring of knowledge so much as simplifying and smoothing the road which leads up to it: with this object in view, I shall endeavour, in these papers, to show that nearly the whole of those things denominated elements, or simple bodies, which, in modern scientific language, are but equivocally so, which "elements" are said to amount in number to about fifty-four. With these presumed elementary substances—or, as some parties term them, "atomic elements"—philosophers go to work, and produce all natural things—that is, they manufacture "fire, air, earth, and water," together with all things that on this world "live, and move, and have their being."

In the term *Nature*, I embrace all those varied results of a "mighty hand" which are manifest to human senses throughout the mineral, vegetable, animal, watery, and gaseous aggregates of the earth—and, from analogy, of all planetary and visible bodies whatever. Now, these results are, in the view I have taken of such things, all of them specific unions of Nature's real elements, in various well-defined, definite, and invariably relative proportions, and the most permanent of such results are the compound substances, which modern philosophers have termed "elements," all of which substances are known to possess relative and removable properties; and, therefore, they are not original things, but must indubitably have been compounded or formed—not, as some people have singularly imagined, out of nothing, but out of real and positive elements, things *in genera*, which were made, created, or imagined, previous to the formation or existence of any natural thing whatever; therefore, I shall endeavour to make it appear that *Nature* is a compound of the least possible number of original (and, consequently, genuine) elements—that is, of two only, and not of more than fifty, as at present imagined.

This view of the production of *Nature* has full support from the Mosaic account of that wonderful and strictly scientific transaction. "In the beginning (says the Hebrew lawgiver) God created, or made, or imagined (for, with HIM, to will, is to produce), the substance, or material, or element, of the HEAVENS, and the substance, or material, or element, of the EARTH." Here, then, we have a distinct avowal that two certain things were made previous to any single union or combination of them taking place, and which, under the circumstances, ought necessarily to be—*for it would have been impossible in the highest degree to have produced a compound of any kind before its constituent parts had been called into being, and put in requisition.*

That Moses's account of the beginning of this world's natural things is, in the abstract, true and consistent, there cannot remain the slightest doubt in the mind of any rational person, if he will but attentively consider the reading here put upon the first verse in Genesis—that is, God made two things, which Moses (or, at least, his translators) have figuratively termed the *heavens* and the *earth*; and that it was but figuratively, is sufficiently manifest from what is stated in the succeeding verse—viz., "and the earth was without form, and void"—which evidently means, that the material, called *earth* in the first verse, had no relative form—no figure that words could convey an idea of, there being nothing then made whereby to measure or compare it; it merely existed as an element—a thing like nothing but itself, and being "void," or empty, it, therefore, possessed no conceivable property whatever. A better definition of the elementary body under consideration could not possibly be given—a thing with respect to form or fashion perfectly barren, and with respect to power or properties perfectly negative.

Now, although Moses has not told us the quantities that were made of these two things, yet he elucidates so far as to say, that one of them had a face—"and darkness was upon the face of the deep;" therefore, it is perfectly fair and reasonable to conclude, that one of the newly-created materials had a limit, an outside, or a boundary (all of which are negative ideas)—and, consequently, it must be admitted, that there was only a specific quantity of it called into being. This material, of course, I will take for granted was the one termed "earth," and which is here considered as the basis of all visible and invisible earthly things. In other words, MATTER—the element by which are made to appear things otherwise totally incomprehensible to relative beings. Through faith (says the Apostle Paul) we understand that the worlds were formed by the word of God, so that things which *are* seen were not made of things which *do* appear; consequently, Paul's view of the matter was, that the world was compounded out of certain invisible—but, nevertheless, real—things, and not out of nothing!

With respect to the other elementary body, Moses distinctly says it possessed motion—"and the spirit of God moved upon the face of the waters," or mass; therefore, although he did not specify the qualities of this element, further than its power of motion, yet, as both it and matter were produced by an omniscient hand, it is quite natural and just to conclude that they were, with regard to properties, made diametrically opposite to each other—the one positive, the other negative—at all points, times, and places; for, had these elements possessed similar properties, or, indeed, had they been endowed with any one

property in common, the labour of so doing would have truly been "labour in vain. Therefore, as matter is, per fair inference, limited as to quantity, the other element (which from the example of Moses, I will, from henceforth (*extra scripto*) may, as it were, be said to be unlimited; and, as spirit was endowed with the power of motion, matter, consequently, may be safely put down as an inert, passive, powerless, and motionless body. Hence it will appear that matter and spirit are elements perfectly dissimilar at all points; the one may be fairly considered the *senile*, and the other the *nadir*, in the apparently unbounded scale of this world's natural things.

Nantyglo, April 2, 1844.

TOLLS ON COAL IN THE PORT OF LONDON.

Sir,—I perfectly agree with the remarks of "An Inland Coalowner," in last week's Journal, respecting the City dues upon inland coals. As well as being an unjust tax to the inhabitants of Watford, and the surrounding villages, it is equally injurious to the inland collieries. The same toll of 1s. 1d. per ton is also levied upon inland coals sent by the canals. Surely, in these times of free trade, this ought not to exist.

Sept. 10.

A SOUTH STAFFORDSHIRE COAL MASTER.

GOVERNMENT SCHOOL OF MINES, AND OF SCIENCE APPLIED TO THE ARTS. Museum of Practical Geology.

The COURSE of STUDY at this INSTITUTION will commence on THURSDAY, the 6th of November, 1851, and the following LECTURES and PRACTICAL DEMONSTRATIONS will be given during the session:

1. CHEMISTRY, applied to Arts and Agriculture . . . LYON PLAYFAIR, Ph. D., F.R.S.
2. NATURAL HISTORY, applied to Geology and the Arts . . . EDWARD FORBES, F.R.S.
3. MECHANICAL SCIENCE, with its applications . . . ROBT. HUNT, Keeper of Mining to Mining . . . Records.
4. METALLURGY, with its special applications . . . JOHN PERCY, M.D., F.R.S.
5. GEOLOGY, and its practical applications . . . A. C. RAMSAY, F.R.S.
6. MINING and MINERALOGY . . . WARINGTON W. SMYTH, M.A.

The fee for the course of two years is one payment of £20; or £20 for each session, from November to August inclusive.

Practical Instruction in the Field, in Geology, Mining, and Palaeontology, is included in the above charges.

Occasional Students may attend separate Courses of Lectures and Field Instruction on payment of the Fees mentioned in the program.

The Laboratories for Chemistry and Metallurgy will be open for the reception of Pupils on payment of £15 for the session of five months.

Officers of the Army and Navy, either in the Queen's or the Honourable East India Company's service, are admitted to the Lectures at half the usual charges.

Students who propose to enter with the view of obtaining the Diploma of the Institution, are requested to apply to Mr. Trevellick, at the Museum, from whom the necessary information may be obtained.

H. T. DE LA BECHE, Director.

LIVERPOOL COLLEGE OF CHEMISTRY. Professor—Dr. SHERIDAN MUSPRATT.

STUDENTS ARE INSTRUCTED IN EVERY BRANCH OF THE SCIENCE. Fees for Analysis or Assays may be had on application, with full prospectuses.

VOL. II., HUNT'S HAND-BOOK TO THE EXHIBITION OFFICIAL CATALOGUES.

An Explanatory Guide to the Natural Productions and Manufactures of the Great Exhibition of the Industry of all Nations, 1851. Edited by ROBERT HUNT, Keeper of Mining Records. This work is so arranged that every visitor will be enabled at once to find the article described, and to obtain a correct account of its characteristics.

"The amount of scientific knowledge here compressed into two small volumes is astonishing; and this knowledge is not of an encyclopaedic character, such as might be easily compiled from books—but fresh and recent on all subjects, more especially in the departments of science. The most instructive guide to the Exhibition while it is open—we have no doubt that this Hand-Book will become hereafter one of the most popular memoranda and histories of the actual gathering of the nations."—*Athenaeum*.

"Useful in the Exhibition, and agreeable afterwards as a reminiscence of what was seen in the Great Year of 1851."—*Spectator*.

WM. CLOWES & SONS, Printers, 29, New Bridge-street, Blackfriars, at Hyde-park; of all booksellers in town and country; and at the Railway Stations.

APPLEDORE SILVER-LEAD MINING COMPANY.

At a MEETING of shareholders, held at the offices of the Company, 51, Threadneedle-street, on Monday last, the 8th inst.

RICHARD HALLETT, Jun., Esq., in the chair.

Mr. Fuller read the note convening the meeting, which was for the purpose of auditing the accounts for June and July, amounting to £339 10s. 6d., which, with £2 12s. for office rent, printing, &c., made £341 2s. 6d., against which there was cash in hand last account, £253 0s. 7d., leaving a deficiency of £88 1s. 11d.: an estimate for August and September cost showing £400 more, it was—

Resolved unanimously.—That the accounts now produced be received and entered in the cost-book—that a regular report be furnished from the mine for publication in the *Mining Journal*; and that a call of 10s. per share be made—payable forthwith into the hands of a banker, to be chosen by the committee, who were re-elected for the ensuing two months.

CALLINGTON MINES COMPANY.

At a QUARTERLY GENERAL MEETING of the shareholders of this Company, held this day.

PETER STAINSBY, Esq., in the chair.

The quarterly accounts and reports having been submitted, it was—

Resolved.—That the reports and accounts now read be received, adopted, and entered in the Company's cost and transfer-books.—Carried unanimously.

Resolved.—That the thanks of the shareholders be presented to the Chairman, for his able conduct in the chair.—Carried unanimously.

WHEAL CATHERINE SILVER-LEAD MINING COMPANY.

At a meeting of shareholders, held at the offices of the Company, 51, Threadneedle-street, on Tuesday last, the 9th inst.

CHARLES JOHN WICKER, Esq., in the chair.

The notice convening the meeting having been read, the accounts were submitted—showing a balance in hand of £401 1s. 11d., after paying off the costs incurred to end of June, it was—

Resolved.—That the accounts now produced be received and entered in the cost-book. The reports of Captains Henry and Mr. John Taylor were then read, which gave great satisfaction.

ANGLO-CALIFORNIAN GOLD MINING COMPANY.

At a MEETING of the scripholders, held at the Freemasons' Tavern, Great Queen-street, Lincoln's Inn-fields, on Thursday, the 11th September, 1851.

CHARLES HINKS, Esq. (of Birmingham), in the chair.

The following RESOLUTIONS were proposed:

Proposed by Mr. Ashton; seconded by Mr. Witham:

That this meeting do adjourn till a future day, with a view to obtain further information on the matters brought forward, and that Mr. Luke Williams be requested to attend at the adjourned meeting.—[Two hands only were held up in favour of this resolution, and the same was lost.]

Moved by James Tabb; seconded by John Ward, and carried unanimously:

That the thanks of this meeting are due to the provisional directors for the candid statement made by them at this meeting, and that the present provisional directors are worthy of the confidence of the shareholders, for their past and present management of the affairs of the Company.

A vote of thanks to the Chairman for his firm and impartial conduct in the chair was proposed and seconded, and carried unanimously.

NEW INVENTION.

THE ELECTRO-MAGNETIC ENGINE, as a SOURCE OF MECHANICAL POWER, TO SUPERSEDE THE USE OF STEAM as a PRIME MOVER TO CAPITALISTS. The above invention having received the testimonials of professors of the greatest celebrity in science, the proprietor is desirous of introducing it into public use, under the protection of Patents. He will TREAT with CAPITALISTS for that purpose, with the ultimate object of FORMING a COMPANY, to be called the "British Electric Power Company."—All communications to be addressed to

FRANCIS S. BEATTY, 29, Capel-street, Dublin.

A Treatise on the subject will be sent free for six postage stamps—a prospectus for one.

BLAKE AND PARKIN, MEADOW WORKS, SHEFFIELD.

MANUFACTURERS OF CIRCULAR and MILL SAWS, Improved CAST-STEEL FILES for the use of Engineers and Machinists.

Patent tempered MACHINE KNIVES and CUTTERS, manufactured for planing and grooving wood, for cutting pattern, iron, stone, leather, &c., made to any pattern or dimensions with the utmost exactness. Warranted to work with a harder and fluer edge than any other mode of temper.

Inventors of core-annaled cast-steel for taps, piston-rods, &c.—Manufacturers of railway springs, blister, shear, and cast-steel, &c. &c.

* * * Samples at the Great Exhibition, Class XXII., No. 193.

FOR THE SHOOTING SEASON, 1851.—DEANE, AMES, & DEANE, GUN-MAKERS TO H.R.H. PRINCE ALBERT,

beg respectfully to call the attention of SPORTSMEN to their late IMPROVEMENTS in GUNS, PISTOLS, and RIFLES, which may be seen and tested daily, with a large assortment of their best town-made GUNS, at the MANUFACTORY, No. 30, KING WILLIAM STREET, LONDON-BRIDGE.—August 7, 1851.

* * * Sporting ammunition of the best quality on the lowest terms.

GAS LIGHTS FOR EXHIBITION.—GUISE'S ORIGINAL ECONOMIC SHADOWLESS GAS BURNERS AND GLASS REFLECTORS are now well known to be the BEST BURNERS AND REFLECTORS IN THE MARKET.—GUISE'S newly-invented GLASS-CONED SHADOWLESS GAS BURNERS have been tested by the first Gas Engineers of the day, and proved by them to be SUPERIOR in BRILLIANCY and ECONOMY to all burners hitherto invented.

They are used with the short common straight chimney, and are extensively adopted by the London Gas Companies, and may be had of all respectable gas-fitters and at Guise's Gas Burner Manufactory, No. 45, Clerkenwell-green, London.

* * * None are genuine unless marked "Guise, Registered," or "Patent."

ED. J. DENT has REMOVED FROM 82 TO 61, STRAND

(being 21 doors nearer to Charing-cross, and directly opposite Bedford-row), and solicits an INSPECTION of his extensive STOCK of CHRONOMETERS, WATCHES, and CLOCKS, as above; also at No. 33, COCKSPUR-STREET, and No. 24, ROYAL EXCHANGE (Clock Tower area).

Now ready, complete, in 2 vols., cloth, price 3s. each; or in 10 parts, price 6d. each.

BOROUGH OF SUNDERLAND—NOTICE TO ENGINEERS AND SURVEYORS.—Any PERSON desirous of OBTAINING the APPOINTMENT to the office of SURVEYOR to the CORPORATION OF SUNDERLAND, is requested to FORWARD TESTIMONIALS of QUALIFICATION and COMPETENCY, addressed (free of postage) to the "Town Clerk, Sunderland," on or before Wednesday, the 8th day of October next, on which day the Committee appointed by the Corporation will meet, at Seven o'clock in the evening, to RECEIVE and examine APPLICATIONS and TESTIMONIALS of CANDIDATES.

As the duties of such Surveyor will comprise the Municipal as well as the Local Boards of Health business of the Corporation, a Candidate must be familiar with the practice of engineering, especially hydraulic engineering, in connection with works of water supply, drainage, sewerage, and surface cleansing—competent to conduct surveys, prepare plans of estates, drawings, and estimates of works of every description, and able to superintend the execution thereof, test the materials, and see to the fulfilment of the conditions of their contracts by contractors for such works.

The whole time of the Surveyor is to be devoted to the duties assigned to him, and he is to be restricted from undertaking any other employment. Salary, £250 per annum, with permission to take pupils.

Candidates are to state their age in their applications, but are not required to attend personally before the Committee, unless specially summoned. The successful candidate is, if required, to give bond for the faithful discharge of his duties. The Town Clerk, on application to him (if by letter, to be post-paid), will answer all inquiries, and give any further information.

Sunderland, Sept. 11, 1851. **WILLIAM SNOWBALL, Town Clerk.**

ONE HUNDRED POUNDS PREMIUM.

THE LONDON COAL METERS' COMMITTEE hereby give Notice, that they are desirous of OBTAINING the BEST PLAN of DELIVERING COALS in the POOL from the SHIPS' HOLD into a BARGE alongside, economically, quickly, and with special regard to the saving of breakage and accurate weighing; and that they will give ONE PREMIUM of ONE HUNDRED POUNDS for the BEST MODEL, or EXPOSITION, of such PLAN or DEVICE, provided that it meets with the approbation of the Committee.

Models, Plans, and Exhibitions, may be sent with sealed letters, containing the name of the exhibitor inside, during the last week of November next, to the Coal Meters' Office, in the Coal Exchange, London; each letter to have a mark, or motto, on the outside, and a like mark, or motto, to be placed on the model or plan.

The plans not approved of will be returned, with the letters unopened, to any persons producing the receipt, which will be given at time of delivery, on any Tuesday, Thursday, or Saturday, in January, 1852, but the Committee will consider all plans or models not taken away in that period as their own property, and deal with them accordingly.

TO MINE PROPRIETORS.—TO BE SOLD, at MENE-FIELD, ARGYLESIRE, a CRUSHING-MILL and WASHING APPARATUS, &c. The CRUSHING-MILL is of considerable power, having a cast-iron overhead water wheel, of 36-feet diameter, driving crushing rollers, and four large break rollers, &c. There are several pairs of new cylinders ready to replace those in use; also a complete set of ROASTING APPARATUS, with ore waggon, waggon-wholes and axles, and a set of blacksmiths' tools, bellows, anvil, &c.

The models of the machinery may be had with it, as they are all at the mine, in good preservation.—Parties wishing to carry on the mine may, with the machinery, have the remainder of the lease of silver-lead ore, yielding from 15 to 20 ounces per ton.

The mine is very favourably situated, lying at the head of Loch Crevan, and the ore or machinery may be put on board ship at 1s. per ton for land carriage.

Applications for purchase may be made to James Burgess, mining engineer, No. 49, Cumberland-row, Newcastle-on-Tyne.

TO IRONMASTERS, RAILWAY DIRECTORS, ENGINEERS, and FOUNDERS.—The SUBSCRIBER having been appointed SOLE AGENT in LONDON for the SALE of Mr. MORRIS STIRLING'S PATENT IRON, begs to intimate that he is prepared to SUPPLY RAILWAY Companies, Engineers, and Founders, with the PATENT MALLEABLE and TONGUED CAST-IRON, and that all orders addressed to him for these, and also for RAILS, with Hardened Surfaces, shall have his prompt attention.

Specimens of the different Irons shown, and every information afforded, on application. Information as to the terms of Licenses under Mr. Stirling's Patents will be given by the Subscriber, and also by Mr. J.E.E., 6, John-street, Adelphi. A. MACNAUGHT.

OFFICES.—2, Queen-street-place, Upper Thames-street.

WAREHOUSES.—Paul's Wharf, 25, Upper Thames-street.

TO BE SOLD, BY PRIVATE CONTRACT, the whole of the FIRE-CLAY WORKS, situated at OLD CASSOP, near DURHAM, comprising STEAM-ENGINE, of 14-horse power, STONES, PUG-MILL, all complete; PRESSING MACHINE for large pipes, and DRAIN-TILE MACHINE; 4 kilns, and 4 large drying flues, 40 feet by 22 feet; branch railway and drift rails; all the moulds for brick tops, &c., necessary for carrying on an extensive business, together with office and foreman's house.—These works are held under the Bishop of Durham by lease, for 21 years, from May, 1847, and are connected by railway with Hartlepool, Sunderland, and Durham.—Terms, half cash, and the remainder in approved bills.

Application to be made to the Old Cassop Fire-Clay Company, Ferry-hill.

ABERSYCHAN IRON-WORKS.—TO BE LET, with immediate possession, or the LEASE TO BE SOLD, of these important IRON-WORKS, in SOUTH WALES, consisting of SIX BLAST-FURNACES, ROLLING-MILLS, and all the necessary appliances.—For further information apply to Messrs. J. and H. Freshfield, New Bank-buildings, London.

VALUABLE MINERAL ESTATE IN WALES.—TO BE LET, ON LEASE, for a term of 50 years, a very valuable PROPERTY in MERIONETHSHIRE. The Estate is extensive: it contains TWO large VEINS of SLATE, of superior quality—the one is a continuation of the Abergareeny Vein, which has produced £40,000 per annum profit, and has been worked very extensively; the other is a vein which has been opened on, and is at present in a state of work. The slate and slabs of this quarry are of the very best description, and of that fine blue colour so much in demand. There is also a very large copper lode passing through the Estate, upon which the proprietors have some men now at work. In addition to these, there is also a course of lead passing through the southern part of the property.

The whole comprises upwards of 332 acres, with the advantage of a fine stream of water passing through the same, and is only four miles distant from an eligible shipping port.—This valuable property, with the advantages therewith connected for forming an extensive and profitable investment, cannot be equalled in the Principality.

Every required information may be obtained from the proprietor by application at the office of Mr. Robert Linthorne, 1, Angel-court, Throgmorton-street.

ANTHRACITE COAL.—A fine FIELD of this valuable FUEL TO BE LET, in the parish of BETTWS, by the side of the Llanelli Railway, 12 miles from the shipping port. The anthracite of this district has proved equal in quality to the Pembrokehire, so highly prized for drying malt. This coal burns without smoke, on which account it has been used at the Great Exhibition in Hyde Park for working the machinery. When this coal is used with a blast, and vapour of water passed through, it produces a splendid fire, generating steam with extraordinary rapidity and the greatest possible economy of fuel.

This mode of combustion is termed by the inventor, Mr. T. H. Leighton, the "hydro-carbon fire," and possesses such manifold advantages, that it must, at no distant period, be adopted on board the Government and mail-packet steamers, on which event the value of this description of property will be greatly enhanced.—For particulars apply to Thomas Jones, Esq., the proprietor, Gelly, Cwm-Aman, near Llandillo.—August, 1851.

STEAM TO INDIA, CHINA, &c.—Particulars of the regular MONTHLY MAIL STEAM CONVEYANCE. AND OF THE ADDITIONAL LINES OF COMMUNICATION, NOW ESTABLISHED BY THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY with the EAST, &c. &c. The Company book PASSENGERS, and receive GOODS and PARCELS, as heretofore, for CEYLON, MADRAS, CALCUTTA, PENANG, SINGAPORE, and HONG KONG, by their steamers, starting from SOUTHAMPTON on the 20th of every month, and from SUEZ on or about the 10th of the month.

One of the Company's first-class steamers will also be dispatched from Southampton for Alexandria, as an extra ship, on the 2d of November next, and of alternate months thereafter, in combination with extra steamers, to leave Calcutta on or about the 20th October and 20th December. Passengers may be booked, and goods and parcels forwarded by these extra steamers to or from SOUTHAMPTON, ALEXANDRIA, ADEN, CEYLON, MADRAS, and CALCUTTA.

BOMBAY.—The Company will likewise dispatch from Bombay, about the 1st November next, and of every alternate month thereafter, a first-class steam-ship for ADEN, to meet there the extra ship between Calcutta and Suez; and at Alexandria one of the Company's steam-ships will receive the passengers, parcels, and goods, and convey them to Southampton, calling at Malta and Gibraltar.

But PASSENGERS, PARCELS, and GOODS for BOMBAY and WESTERN INDIA will be CONVEYED THROUGHOUT from SOUTHAMPTON in the Mail steamers, leaving Southampton on the 20th of October, and of alternate months thereafter, and the corresponding vessels from Suez to Aden, at which latter port a steam-ship of the Company will be in waiting to embark and convey them to Bombay.

Passengers for Bombay can also proceed by the Company's steamers of the 29th of the month to Malta, thence to Alexandria, by Her Majesty's steamers, and from Suez by the Honourable East India Company's steamers.

MEDITERRANEAN.—MALTA: On the 20th and 29th of every month.—**CONSTANTINOPLE:** On the 29th of the month.—**ALEXANDRIA:** On the 20th of the month.

SPAIN AND PORTUGAL.—Vigo, Oporto, Lisbon, Cadiz, and Gibraltar, on the 7th, 19th, and 27th of the month.

N.B.—Steam-ships of the Company now ply direct between Calcutta, Penang, Singapore, and Hong Kong, and between Hong Kong and Shanghai.

For further information and tariffs of the Company's recently revised and reduced rates of passage-money and freight, and for plans of the vessels, and to secure passages, &c., apply at the company's offices, No. 122, Leadenhall-street, London; and Oriental-place, Southampton.

TO MINE PROPRIETORS, WATER-WORKS AND LAND-DRAINAGE COMPANIES, CONTRACTORS, MANUFACTURERS, and OTHERS.

GREAT BRITAIN STEAM-SHIP.

The PROPRIETORS of this SHIP desire TENDERS for the WHOLE (or for any definite section, that would not prejudice the entirety of the remainder) of HER STEAM MACHINERY, as originally constructed, consisting of FOUR 88-inch CYLINDERS, of 6-feet stroke, with pistons and rods, air-pumps and condensers, connecting-rods and guides, and all the detail of nozzle and valve gear, necessary to render each pair of cylinders complete in themselves, and to be connected by crank-pieces.

Apply to Mr. Croome, civil engineer, or Capt. Mathews, on board the vessel, Sandon Graving Dock; or Gibbs, Bright, & Co., Liverpool.

TO AGRICULTURISTS.—IMPROVEMENTS IN THE PREPARATION OF MANURES.—AGRICULTURISTS are INVITED to take SAMPLES of MANURES (Stones' Patent Huminate), free of expense, at the office of the GENERAL PEAT WORKING and MANURE COMPANY, 6, JOHN-STREET, ADELPHI, LONDON.—The Patent Huminate is free from filthy matter; it consists entirely of concentrated decomposed vegetable organic substances, soluble humic acid, fixed salts of ammonia, and other ingredients, according with soil, plant, and climate. It will promote vegetation in all its requirements, and invariably improve the soil, and challenge the best guano, at one-third the cost.

To every scientific person, or practical farmer (however deficient in knowledge of chemical science), who inquires into the composition of these manures, the folly of bringing guano to England, even though they cost but one quarter the price now paid for them, will appear most undeniably.

Samples may be had on application at the Mining Journal office, 26, Fleet-street.

CHYPRASE CONSOLS TIN AND COPPER MINE, situated in the parish of ST. ENODER, near TRURO, CORNWALL. In 1024 shares, of £5 5s. each.—Deposit £1 7s. 6d. per share.—Conducted solely on the COST-BOOK SYSTEM.

The attention of mining speculators and others is particularly directed to this promising undertaking, which, from the progressive and forward state of the works, holds out every prospect of its soon becoming a good dividend-paying mine; and from its known richness it is well worthy the attention of speculators in mining property.

A few shares only are offered to the public, as more than three parts are already taken up; therefore, immediate application is absolutely necessary, to be made to the Committee of Management, through Mr. Thomas Lewis, No. 17, New Meeting-street, Birmingham, or Messrs. A. Yeates, Esq., solicitor, 77, New Hall-street, Birmingham; or to Messrs. Boxall and Co., 7, George-yard, Lombard-street, City, London.

Prospectuses, reports, and every information, may be obtained upon application to either of the above named parties; the Committee of Management have decided to allot shares to approved applicants until further notice.

The deposits may be paid to the bankers of the Company, the "National Provincial Bank of England," at Birmingham; or through their London and provincial houses.

By order of the committee, **THOMAS LEWIS, Purser.**

Birmingham, August 8, 1851.

NORTH TRELAUNY MINE (SILVER-LEAD AND COPPER), PARISH OF LINKINHORNE, COUNTY CORNWALL.

In 16,000 parts, or shares, of 10s. each, in scrip to bearer.

This Association is conducted under a Committee of Management, on the principle of the "Cost-book," which exempts proprietors (the undertaking being within the jurisdiction of the Stannary Court) from any liability beyond the amount of their shares, and enables them to withdraw at any time, by giving notice to the purser to that effect.

In addition, scrip (payable to bearer) will be issued for the parts or shares, which will make it optional with the holder to register or not.

This mining scrip, from its geological position alone, is one of great value, both for silver-lead and for copper, which is confirmed by the discoveries already made, and give assurance of the best results.

North Trelawny is at Billa Mill, in the parish of Linkinhorne, and manor of Rillaton; it is bounded, generally, on the north and east by the Callington district; on the west by the well-known Caradon; and on the south by the celebrated Trelawny district.

The Trelawny lode of silver-lead runs through this sett north and south, and the Caradon copper lode likewise traverses the property east and west. It is superfluous to allude to the well-known extraordinary richness of either the Caradon or the Trelawny mines. The stratum generally is rich blue soft "plum" killas, which is so congenial for the production of rich mineral, and can be worked with much facility and economy.

Prospectuses, with form of application for shares, and every information, may be obtained at the offices, No. 30, Bucklersbury.—By order, **JAMES A. MAY, Purser.**

WHEEL TREASURY.—Granted at 1-24th dues, or royalty.

Divided into 1000 shares, of £10 each—to be paid by instalments as may be required.—Now and for upwards of 18 months past working on the Cost-book Principle.

The ores now raising will more than pay the current cost. A steam-engine and other necessary machinery are indispensable for the further development of the mine.

Specimens of the mine, and prospectuses, may be seen and obtained at Mr. Forster's office, 5, White Hart-court, Lombard-street, London; or prospectuses may be obtained of John Rose, Esq., the purser, Penzance, Cornwall; also of Mr. J. Jones, mine broker, Butler's Head Tavern, Great Bell-alley, Moorgate-street, City.

WEST CAMBORNE MINING COMPANY.

Divided into 5000 shares.—Deposit 20s. per share.

CONDUCTED ON THE COST-BOOK PRINCIPLE.

LONDON OFFICES.—3, GEORGE-YARD, LOMBARD-STREET.

These mines are in the same stratum of ground, and stand parallel to, and east and west of, Wheal Grenville, Tolcarne, Condurrow, Wheal Harriet, West Frances, South Frances, West Basset, North Basset, and numerous other valuable and productive mines. They are held under lease for twenty-one years, at 1-18th dues, being situated at Carnyarnon (the property of Hendre Moleworth St. Aubyn, Esq.), in the western part of Camborne, in the county of Cornwall—the most metalliferous district in the west of England, and the seat of many east and west lodes, which present on the backs the usual indications of the district—viz.: gossan, quartz, blende, iron pyrites, fine specimens of grey and oxide of copper ore, together with other metallic concomitants. Several slides and cross-courses intersect the lodes, of known importance; a fine elvan-couise exists about the junction of the killas and granite, which takes place in the Company's grant.

From the ablest and most careful judgments of the oldest and best mining agents in Cornwall, £6000 is deemed ample sufficient to purchase and erect the necessary machinery, and bring the mines into profitable and good working order; therefore, it is proposed to sell 30 shares, at £2 each, and the remaining 200 shares to be retained by the proprietors for the transfer of the property, leases, and remuneration for work done.

The following few mines, situated in the same district, and within a short distance of the Company's grant, have paid, during the past half-year, £38,042 in dividends—the whole expenditure to realise which was £20,022, and the present market value of the same is £645,840. Thus it will be seen that the average return is £95 per cent. per annum upon the original cost, and upwards of £11 15s. per cent. per annum upon the current market value of shares. The aggregate amount of profits from these mines, divided, exceed £278,000—thus returning to the fortunate shareholders more than eight times their outlay, and the prospects of continued success at present being equal to any period of their existence.

| | | | |
|---------------------------|---------------|---------------|----------|
| Wheal Buller | £ 1,280 | £3320 | £134,400 |
| Carn Brea | 15,000 | 7000 | 105,000 |
| South Wheal Frances | 19,840 | 5954 | 64,480 |
| South Wheal Basset | 2,630 | 8120 | 102,400 |
| North Pool | 4,500 | 4500 | 50,000 |
| Wheal Seton | 21,185 | 1980 | 49,600 |
| South Tolgus | 4,095 | 1920 | 40,960 |
| North Rosebar | 10,000 | 1750 | 21,000 |
| North Wheal Basset | 1,500 | 1500 | 7,500 |
| Total | £80,022 | £38,042 | £645,840 |

The expenditure, price, and profits divided, as far as can be gathered, are stated above. Many other mines in the neighbourhood, not valued, are selling at considerable premiums, and fast approaching dividends; but as the market price partakes more of a speculative than intrinsic value, and subject to constant changes, they are omitted.

Applications for shares to be made to the secretary, Mr. H. B. Bousfield, at the Offices of the Company; and to Messrs. Tredinnick and Co., 3, George-yard, Lombard-street, London, of whom prospectuses and all further particulars can be obtained.

PROSPECTUS OF THE LEE MOOR PORCELAIN CLAY COMPANY.—(Provisionally Registered).—To be carried out on the principle of LIMITED LIABILITY.

Capital £100,000, in 4000 shares, of £25 each.

Calls £12 10s. each (with an interval of two months between each call).

DIRECTORS.

The Right Honourable the EARL OF MORLEY, of Kent-house, Knightsbridge, and Saltram, Devonshire, Chairman.

THOMAS HAWES, Esq., 15, Regent-street, London, Deputy-Chairman.

Sir WILLIAM SNOW HARRIS, Knt. Plymouth.

THOMAS H. BULTELL, Esq., banker, Plymouth.

CHRISTOPHER HARRIS, Esq., banker, Plymouth.

JAMES RHODES, Esq., Lombard-street, London.

AUDITORS.—Henry Lloyd Morgan, Esq., Langbourne Chambers, Fenchurch-st., London; John Radford, Esq., Plymouth.

SECRETARY.—Mr. Sidney Smith.

SOLICITORS.—Messrs. Amory, Travers, and Smith, London.

CONSULTING ENGINEER.—John Hawkley, Esq., 23, Great George-street, Westminster.

BANKERS.—The London and County Bank.

OFFICES.—No. 30, BUCKLESBURY, LONDON.

Referring for detailed particulars to the prospectus, of which copies may be had at the offices, the Directors announce that one-half of the whole stock consists of preferential shares, entitled to a dividend of 6 per cent. before any profits are divisible upon the remainder of the stock.

It is estimated that the total annual consumption of porcelain clay in Great Britain is 51,000 tons. The Lee Moor clay bears the highest scientific character; and as, from lying immediately at the surface, it dispenses with the cost of mining operations, the price which it commands in the market readily yields a profit of 15s. per ton. A sale of only 12,000 tons, therefore, would produce £9000, or a dividend of 6 per cent. on the whole stock of £100,000—leaving a surplus of £3000 to cover all expenses, or of £6000 as a surplus security for the dividend on the Preferential Shares.

An additional profit of 3 per cent. per share is anticipated at a moderate calculation from the sale of the adjunctive materials produced, without additional expense, from the minerals forming the refuse of the elements of which the clay is composed.

Applications (accompanied by a reference) for the Reserved Preference Shares, which are alone now offered to the public, may be made to the Directors, at the offices of the company.

By order of the Directors, **SIDNEY SMITH, Secretary.**

TO THE MINING AND SHIPPING INTERESTS.

WIRE AND HEMP ROPES.—MANUFACTURED under PATENT GRANTED TO JAMES B. WILSON.

HAYDOCK ROPE WORKS, NEAR WARRINGTON.

APPLICABLE TO SHIPPING, INCLINED PLANES, MINES, COLLIERIES, &c.; as also to WIRE CABLES for SUBMARINE, OVERLAND, and UNDERLAND TELEGRAPHS.

Sizes, with comparative weights and strength, as also price per cwt. or fathom, may be obtained on application to the patentee.

All sizes of wire strands, railway signal lines, flat and round copper rope, lightning conductors, window sash lines, &c.—Warrington, July 5, 1851.

TO DOCK COMPANIES, WHARFINGERS, COAL, STONE, TIMBER MERCHANTS AND OTHERS.

PATENT STEAM WHIPPING COMPANY.

Messrs. E. & A. PRIOR, the Managers of this Company, are now UNLOADING, by means of an ENGINE, their COLLIERIES in the THAMES, at an average rate of 20 tons per hour, or upwards of two hundred tons per day, and at a considerable reduction in cost.

They have numerous highly satisfactory certificates from captains whose ships they have discharged, and to the owners of which the greatly increased despatch is obviously a matter of the greatest importance.

The remarkably small dimensions and weight of the engine admits of its being placed on, and removed from, the ship's deck with the greatest facility and despatch, by means of the barge and derrick. These engines are also thoroughly adapted for unloading in the docks, or for permanent use on board all large ships, where, in addition to working out the cargo, they might be most advantageously used for doing all the other heavy work, such as pumping, lifting the anchor, warping, &c.

This company are now prepared to contract for the unloading of any quantity of coals, or to grant Licenses for the use of the patent, on application to the managers, Messrs. E. & A. PRIOR, 155, Upper Thames-street, London.

THE PATENT WATER-BALLAST STOWAGE BAGS and PUMPS having BEEN TESTED, and met the approval of practical men, the Public is respectfully informed that all is now prepared for FITTING UP SHIPS, by application to Mr. KIRK, at the WORKS, GIBSON'S-BUILDINGS, NEWCASTLE-UPON-TYNE, where a pamphlet and illustrations may be obtained by, or forwarded to, parties, and where all inquiries will be fully replied to.—Newcastle-upon-Tyne, Aug. 15, 1851.

DEVON COPPER ORE SMELTING COMPANY. [PROVISIONALLY REGISTERED.] Capital £12,000, in £12,000 shares, of £1 each.—(No further call or increase of capital).

JAMES LAMB, Esq., 89, Gloucester-terrace, Hyde Park.

GEORGE BURN OMAN, Esq., 23, Westbourne-terrace road, Hyde Park.

ALEXANDER PETER, Esq., Bishopgate-street-within.

JOHN R. DAVIDSON, Esq., Elm Villa, Finchley.

BANKERS.

LONDON.—The London and Westminster Bank, Lothbury.

COUNTRY.—Messrs. Hawkey, Nicholls, and Co., Falmouth.

SOLICITOR.—E. Manby, Esq., Lombard street Chambers.

PROVISIONAL SECRETARY.—E. Manby, Esq.

BROKERS.—Messrs. Lind and Richard, Bank Chambers, Lothbury.

It is well known that the immense quantities of poor copper ore at the mines of Devon and Cornwall have hitherto been deemed almost valueless, owing to the expense attending the extraction of the copper, but by a method of concentrating and converting patented, as "Todd's Patent," not only the copper, but the other chemical products, particularly the arsenic, in these descriptions of ore, can now be made available at a very small expense; the copper being concentrated for sale to the smelter, and at the same time, without any additional expense, the arsenic is extracted; the profit from the latter alone being sufficient to defray the cost of concentrating the copper, and to leave a large return.

The efficacy of this process has been proved to the satisfaction of the most experienced chemists, amongst whom may be named Dr. Ure, M.D., F.R.S., and Professor of Chemistry; and William Phillips, Esq., Curator of the Museum of Practical Geology.

Arrangements have been made with the patentee upon favourable terms, and the object of this company is to carry into effect, to the largest practical extent, the process in question; and after the closest investigation, the directors feel justified in anticipating a very large return for the capital employed, as shown by the following estimate:

The cost of 3000 tons of ore, and expense of working the same, in coke, wages, &c., &c., proved by actual results, would be £2 per ton, or in all

The produce of these, according to actual results would be—

1000 tons of copper regulus, worth £4 per ton

100 tons of arsenic, at £10 per ton (the present market value being £11 per ton)

From which deduct cost as above

Net profit

Any person well acquainted with the value of the two products, copper and arsenic, will at once perceive that the above is rather under than over the mark.

The above calculation is given merely to show the result on 3000 tons, but the works will be capable of concentrating a much larger quantity annually.

The patentee has offered to the company the temporary use of his extensive premises at Bissoe, near Truro, until the company's works are erected, and these premises having already been used by him in proving the value of his patent, the company will be able, immediately on being formed, to commence working.

The copper regulus obtains a ready sale to almost any extent; and the consumption of arsenic is very considerable, and annually increasing—the present consumption being 3000 tons per annum. An interest to the extent of 3000 shares will be taken by the patentee, and the agreement with him, as also the reports of Dr. Ure and Mr. Phillips, may be seen, and all further particulars learned, at the office of the company.

Prospectuses and forms of applications for shares may be obtained at the (temporary) office of the company, Lombard-street Chambers, of the solicitor, and of the brokers.

Scrip in exchange for the bankers' receipts, will be issued the week after allotment.

TO THE DIRECTORS OF THE DEVON COPPER ORE SMELTING COMPANY.

GENTLEMEN,—I request you to allot me shares in the above Company, and I hereby agree to take the same, or any less number; you may allot me, and to sign the Deed when required.

Name

Address

Occupation

Dated this day of 1851. Reference

FINAL NOTICE.

ST. AGNES BEACON TIN AND COPPER MINE, CORNWALL.—In 2500 shares, of £1 1s. each.

(ON THE COST-BOOK SYSTEM—No further Liability).

In conformity to the Law of the Stannaries.—Committee to be selected from the shareholders.

BANKERS.—London and Westminster Bank.

The share list being nearly complete, NO FURTHER APPLICATIONS will be RECEIVED by F. W. Pike, Esq., 26, Bedford-row; or Mr. John Morgan, sworn broker, 2, Cophall-court, London, after SATURDAY NEXT.

Dated September 13, 1851.

WHEEL CARPENTER.—At a GENERAL MEETING of adventurers, held at the Bedford Hotel, TAVISTOCK, on Tuesday, the 9th of Sept., 1851, pursuant to Notice, duly given by circular, dated 28th day of August last, **GEORGE WHITMORE, Esq., in the chair.**

The resolutions of the last meeting were read, and the cost-book and purser's accounts having been submitted, with the committee's certificate of audit—showing a balance in favour of the Company of £29 6s. 8d. at the bankers, it was

Resolved,—That the same be allowed and passed, and an analysis thereof made at the end of these minutes.

The report of Capt. Lean (for which see "Mining Correspondence") having been read, it was resolved,—That it be received and copied with these minutes.

It having been reported by the committee that Mr. John Hitchens had resigned the office of manager, on going abroad, and that it was not thought necessary to fill up his situation, it was

Resolved,—That Capt. Wm. Lean be now appointed the resident mining agent, at Six Guinea per month, commencing from the month of June last.

Resolved,—That a call of £1 per share be now made, half thereof to be paid within 21 days, and the other half within two months.

The purser reported that one proprietor holding 50 shares is the only one in arrear for calls, and having submitted to the meeting a letter from such proprietor,

It was resolved,—That the eleventh rule in the regulations of the company be enforced, and that the 50 shares of this proprietor be accordingly absolutely forfeited—and that he be informed that the company cannot recognise the claim of any adventurer, to supply materials as a set-off against his calls, although this meeting admits the propriety of giving to shareholders who duly pay their calls, the preference of supply at the lowest market price for coal; and also that upon payment of this arrear of £50 within 14 days, it will be recommended to the next general meeting to restore these shares.

Resolved,—That the thanks of the meeting be given to the committee for their attention, and audit of the accounts, and that they be requested to continue their services.

Resolved,—That these minutes, together with the report and accounts be printed and circulated amongst the shareholders.

GEORGE WHITMORE, Chairman.

The thanks of the meeting were unanimously presented to Mr. Whitmore for his conduct in presiding.

GENERAL STATEMENT OF ACCOUNTS.

April 8—Balance per account, audited and passed at general meeting of this date

Amount of call made at this meeting

Less one proprietor in arrear

Total

Sept. 9—Working costs and agents' salaries for 5 months, ending July last

Steam-engine

Merchants' bills, &c.

Balance at bankers

Total

Dr. Balance at bankers

Call unpaid

Balance

Total

Cr. Sept. 9—Merchants' bills, &c., payable at end of this month

Cost for August, and completion of engine and pitwork, computed 250 0 0

Total

Balance, together with current costs, provided for by call, £431 2s. 6d.

WHEAL MATILDA (SILVER-LEAD), In the parish of BROADOAK, in the county of CORNWALL.

Divided into 1200 shares.

ON THE COST-BOOK PRINCIPLE.

This sett is held under a lease granted by the Right Honourable Baroness Grenville, of Droppore, in the county of Bucks, for 31 years from the 14th day of February, 1852. It adjoins Wheal Catherine, and is very conveniently situated and extensive—full 700 fms. in length and the same distance in breadth. A shaft is now in the course of sinking on one of the lodes, and is down 4 fathoms below the surface, at the bottom of which is a good course of lead in a large broken lode, with spar, pyrite, &c. Such a discovery so near the surface is very rarely met with; those who have inspected it have reported that it very much resembles the East Wheal Rose. A small parcel of lead is already in course of cleansing, the produce of which is about £25 per ton for silver and lead. The assay was by Mr. John Harney, Liskeard.

The proprietor has expended about £150 in discovering and opening on the lodes. Such are the prospects that are laid open that no one can deny that it is a sure investment. The proprietor, wishing to work the mine with spirit and economy, is disposed to offer 1000 of the shares to any respectable company that will take them and work the mine immediately, at any reasonable terms they may be disposed to offer. A very little outlay will bring the mine into a paying condition, it being only now necessary to provide funds to pay for the erection of a good water-wheel, pitwork, floors for dressing the lead, &c., the mine will then pay its own cost; this will only take from 10s. to 12s. per share.

The proprietor has witnessed the opening of many new lodes in his time; and he scruples not to say in confidence, that there never was a better discovery made in this county at the depth. Such an opportunity never was offered to the public on such favourable conditions. He is well aware of the evils connected with merely getting up soils for sale—drawing money by hundreds and thousands from the pockets of the unwary, as some have done, with no view of benefitting the public; this he hopes will never be his motive.

He, therefore, wishes persons desirous to take shares to either go and inspect the mine for themselves, or send some practical man, or men, to inspect the concern before they embark.

The ground in this sett is very cheap for exploring, being a soft flooken clay-slate, and is much the colour of the lead. There is one great and invaluable advantage connected with the working of this property—a never-failing river runs through the sett, which can be applied to the working of all machinery that may be required, thus curtailing all expenses in steam-engines, coals, &c.

Parties wishing to treat for any part or all of the 1000 shares may know the conditions by applying either to Mr. John Stephens, Gange Cottage, St. Ives, near Liskeard; or to Mr. Thomas Sargent, Liskeard; or to Mr. William Donny, auctioneer, Liskeard; or to Mr. John Seymour, St. Cleer, Liskeard; or Mr. Reynolds, 23, Threadneedle-street, and Messrs. Molyneux and Co., 34, Threadneedle-street, London.

* Many parties have applied for the sett already, but the proprietor's wish is to have a good company.

| Shares. | Paid. | L at Price. | Present Price |
|------------------------------|-------|-------------|---------------|
| 1024 Treasurers Remuneration | 1 | 41 | |

| Shares. | | Paid. | L. of Price. | Present Price. |
|---------|--|-------|--------------|----------------|
| 1024 | Trebarhau, Perranulmoo | 1 | 4½ | ..... |
| 3048 | Trebell Consols (tin and copper), Lanivet .. | 12 | 1½ | 2 1½ |
| 600 | Tregardock (lead), St. Teath | 12 | 5 | ..... |
| 1024 | Tregordon (silver-lead) Wadebridge .. | 15 | 12 | 10 |
| 1024 | Trelawth (copper), St. Erth | 5 | 4½ | ..... |
| 1024 | Trellyn Consols (tin), St. Ives | 4½ | 5 | ..... |
| 1024 | Treman (copper), Lizard | 1½ | 3 ½ | ..... |
| 2000 | Trenance (copper), Helston | 6 | 5 | ..... |
| 6000 | Trenault (lime quarries) | 21½ | 21½ | ..... |
| 512 | Treihvey (copper), St. Cleer | 10½ | 3½ | ..... |
| 512 | Treville (lead), Lewannick | 4½ | 5 | 5 6 |
| 604 | Trown Consols (tin), Towenedn | 7 | 9 | ..... |
| 100 | Trumpet Consols (tin), near Helston | 95 | 100 | ..... |
| 4000 | Tyn-y-Worglod (slate), near Carnarvon .. | 4 | 4 | ..... |
| 500 | Tywarhaye (cop.), Illogan & St. Agnes .. | 60 | 22 | ..... |
| 512 | Tywardreath (copper), St. Blazey | 2 | 12½ | ..... |
| 1024 | United Mines (copper and tin), Tavistock .. | 12 | 10 | ..... |
| 200 | United Mines (copper), Gwennap | 300 | 75 | ..... |
| 5000 | Warleggan Consols (copper) | ½ | ½ | ..... |
| 1024 | West Alfred Consols | 8 | 13 | 13 14 |
| 5000 | West Basant (copper), Illogan | 8½ | 11 | ..... |
| 1024 | West Beam (tin), St. Austell | 24½ | 24 | ..... |
| 256 | West Damsel (copper), Gwennap | 5½ | 45 | ..... |
| 1024 | West Ding-dong (tin) | 1 | 2½ | ..... |
| 512 | West Fowey Con. (tin & cop.), St. Blazey .. | 40 | 60 | ..... |
| 2048 | West Goghan (silver-lead), Cardiganalro .. | 1½ | 3 | ..... |
| 1024 | West Par Consols (copper), St. Blazey .. | 10 | 10 | ..... |
| 1024 | West Phoenix, Linkinghorne | 5 | 6 | ..... |
| 6500 | West Polgooth (tin), St. Ewe & St. Mewan .. | 1 | ½ | ..... |
| 200 | West Seton (copper), Camborne | 71 | 115 | ..... |
| 256 | West Sharn Tor (copper) Linkinghorne .. | 22 | 49 | ..... |
| 940 | West Tolgoth (copper), Illogan | 14 | 4½ | 4½ |
| 120 | West Trethellan (copper), Gwennap | 15 | 20 | 10 |
| 5000 | West Wheal Alfred | 1½ | 14 | ..... |
| 512 | West Wheal Frances (copper), Illogan .. | 8 | 14 | ..... |
| 4000 | West Wheal Friendship (copper) | 1½ | 14 | ..... |
| 3715 | West Wheal Jewel (tin and copper) | 12 | 14 | 1 |
| 3715 | Ditto preference | ½ | 14 | ½ |
| 2048 | West Wheal Rose | 2 | 1½ | ..... |
| 4000 | West Wheal Russell, Tavistock ..... | ..... | 2 | 2 |
| 1024 | West Wheal Sheba | 10½ | 1 | ..... |
| 500 | West Wheal Towan (copper), Illogan | 19 | 10 | ..... |
| 1024 | West Wheal Treasury (copper), Gwinear .. | 8 | 4 | 3½ |
| 1024 | West Wheal Virgin (tin), Sancreed | 2 | 1½ | ..... |
| 1024 | Weston (lead), Chertsey, Shropshire | 1½ | 5 | ..... |
| 1070 | Wheal Adams (lead), Christow, Exeter .. | 15 | 16 | ..... |
| 1000 | Wheal Agar (copper), Illogan | 6 | 5 | ..... |
| 300 | Wheal Arthur (lead), near East Wh. Rose .. | 17 | 49 | ..... |
| 1228 | Wheal Arthur (silver-lead & cop.), Calstock .. | 15 | 2½ | 4 |
| 3072 | Wheal Augusta (tin), St. Just | 1 | 1½ | 1½ |
| 240 | Wheal Bal (tin), St. Just | 5½ | 10 | 10 |
| 2500 | Wheal Caradon (copper), St. Cleer | 2 | 2 | ..... |
| 256 | Wheal Carpenter (tin), Gwinear | 1½ | 5 | ..... |
| 1024 | Wh. Carpenter (lead & cop.) S. Sydenham .. | 2 | 2 | 22 2 |
| 124 | Wh. Castle and Boswedden (tin & copper) .. | 5 | 20 | ..... |
| 1024 | Wheal Catherine (silver-lead), Liskeard .. | 24 | 3 | 3 |
| 1024 | Wheal Crebor (copper), Gwinear | 1 | 4 | ..... |
| 1024 | Wheal Cupid (copper), Gwennap | 4 | 24 | ..... |
| 3000 | Wheal Dora (tin and copper), St. Cleer .. | 35 | 5½ | ..... |
| 4096 | Wheal Edward (copper), Calstock | 3 | 1½ | ..... |
| 182 | Wheal Elizabeth (copper), Redruth | 23 | 5 | ..... |
| 1024 | Wheal Emma | ½ | 5 | ..... |
| 182 | Wheal Ennis (lead), St. Erme | 17 | 20 | ..... |
| 1070 | Wheal Enys (tin), Wendron | 12 | 1½ | ..... |
| 5000 | Wheal Fanny (lead) | — | 3 | 3 |
| 916 | Wheal Fortescue (copper), Tavistock | 54 | 1½ | ..... |
| 5048 | Wheal Fortune (lead), Landulph | 22 | 2 | ½ |
| 1024 | Wheal Gwennap ..... | ..... | ..... | ..... |

| | |
|-----|--|
| 100 | Wheat Friendly (tin), St. Agnes |
| 256 | Wheat Gennys (lead), St. Eudocia |

| | | | | |
|------|---|----|----|----|
| 1536 | Wheat Gill (cop. and lead), Liskeard | 3 | 34 | 24 |
| 1538 | Wheat Hamlyn, near Oakhampton | 1 | 1 | 1 |
| 2560 | Wheat Harriet (copper), Camborne | 1 | 1 | 1 |
| 2608 | Wheat Harris (lead), near Tavistock | 1 | 1 | 1 |
| 2152 | Wheat Henry (copper), Kea, near Truro | 25 | 8 | 1 |
| 6000 | Wheat Langford (copper and silver-lead) | 4 | 6 | 1 |
| 1034 | Wheat May (silver-lead and copper) | 23 | 34 | 24 |
| 1024 | Wheat Mary Ann (copper), Bridestow | 1 | 1 | 1 |
| 1024 | Wheat Mary Emma, Tavistock | 1 | 1 | 1 |
| 1024 | Wheat Mandlin, Llanllyfni | 1 | 4 | 1 |

| | | | |
|---|----|-----|----------|
| Wheel Oak, near Helston | 12 | 12 | |
| Wheel Penhale (lead and copper) | 33 | 33 | |
| Wheel Plenty (copper), Redruth | 29 | 38 | |
| Wheel Pollard (copper), St. Cleer | 15 | 10 | |
| Wheel Providence, South Sydenham | 2 | 3 | |
| Wheel Prudence (copper), St. Agnes | 24 | 34 | 6 |
| Wheel Robins | 2 | 14 | |
| Wheel Russell (copper), Tavistock | 14 | 14 | 14 |
| Wheel Ruth (tin), Shepston | 3 | 2 | |
| Wheel Sampson | 1 | — | — |
| Wheel Sophia (silver-lead), Lezant | 7 | 64 | |
| Wheel Speedwell (copper and tin) | 2 | 2 | |
| Wheel Squire (copper), St. Erth | 3 | 14 | |
| Wheel St. Agnes (tin), St. Agnes | 14 | 2 | 5 |
| Wheel Stanagwyn (copper), St. Stephen's | 1 | 2 | |
| Wheel Susan, Breage and Crowan | 3 | — | |
| Wheel Sydney, Plymouth | 14 | 14 | |
| Wheel Tom (tin & copper), Stoke Clims | 5 | 114 | |
| Wheel Treasury | 1 | 14 | |
| Wheel Trefas (copper), Gwennap | 84 | 15 | 15 |
| Wheel Treloback (copper), Stythians | 5 | 5 | 5 |
| Wheel Tremaine (copper), St. Ervan | 11 | 1 | 1 |
| Wheel Trewane (silver-lead), St. Kew | 14 | 5 | 5 |
| Wheel Tryphena (tin and cop.), Redruth | 40 | 184 | |
| Wheel Unity (copper), Redruth | 40 | 40 | |
| Wheel Union (copper, & tin), Gwinnear | 3 | 24 | 4 34 |
| Wheel Ury (tin and copper) | 3 | 54 | 54 6 |
| Wheel Vanton (silver-lead), Liskeard | 44 | 64 | 7 64 |
| Wheel Victoria (copper) | — | 24 | |
| Wheel Vincent (tin), Alternun | 74 | 74 | |
| Wheel Violet (tin and cop.), St. Stephens | 14 | 34 | |
| Wheel Vlow | 2 | 4 | 4 |
| Wheel Williams (copper) | — | 14 | |
| Wheel Wry (copper), St. Ive, Liskeard | 24 | 64 | 2 |
| Wheel Zion (lead and lead), Tavistock | 14 | 64 | 7 8 84 9 |

| FOREIGN MINES. | | Paid. | Present Price |
|--|----|-------|---------------|
| Annotto Bay Mining Association (copper), Jamaica | 1 | 5 | |
| Anstruther (copper), South Australia | 5 | 4 | |
| Kinszlicht Mining Association (copper), Germany | 24 | — | |
| Liguanea and General Mining Company of Jamaica | 1 | 3 | |
| Linares (lead), Spain | 3 | 14 | |
| Ditto Preference | 3 | 3 | |
| Ditto Additional | 3 | 14 | |
| Mexican and South American (copper), Mexico | 34 | — | |
| National Brazilian (copper), Brazil | 40 | 24 | 24 2 |
| North British Australasian (copper), S. & New | 1 | — | |
| Worthing (copper), Adelaide, South Australia | 4 | 24 | |

BICKFORD'S PATENT SAFETY FUSE.—The Patentees of the ORIGINAL, and only real, SAFETY FUSE, beg to inform Merchants, Agents, Railway Contractors, and all persons concerned in Blasting Operations, that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE has now a thread wrought into its centre, which being patent right, is thereby distinguished from all imitations, and ensures the continuity of the gunpowder. The Safety Fuse is now protected by a Second Patent, and manufactured by greatly improved machinery.

BICKFORD, SMITH, DAVEY, Camborne, Cornwall.

TIRLING'S PATENT YELLOW METALS.—Adapted for SHEATHING, BOLT STAVES, BOLT NAILS, DECK NAILS, as reported on by late Mr. Owen, Supervisor of Metals to the Admiralty; also for PROPELLERS, FRAMEWORK SCREWS, PISTONS, CYLINDERS, COCKS (particularly where there is exposure to corrosion), RAILWAY CARRIAGE AXLE BEARINGS, and for all machinery subject to friction.

AGENTS.
Messrs. JOHNSON, 166, Buchanan-street, Glasgow.

Applications for licenses and other information to be addressed to the undersigned,
ALFRED BARRETT, Bishopsgate Foundry, Skinner-street.

New Patents.

LIST OF PATENTS GRANTED DURING THE PAST WEEK.

J. Borden, jun., of Galveston, Texas, (U.S.) America, for improvements in the treatment of certain animal and vegetable substances, to render them more convenient for use as articles of food, and for their better preservation.

R. Crook, Birmingham, for improvements in hats, caps, and bonnets.

M. Main, Beaumont-square, for improvements in steam-engines and in furnaces.

J. J. Verillat, Brest, France, for improvements in the extraction and preparation of sassafras, tanning, and saccharine matters from various vegetable substances, and in apparatus to be employed therein.

Blair, Irvine, Ayr, for certain improvements in beds or couches and other articles of furniture.

DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

Marion and Co., Regent-street, pencil-cutter and sharpener.—J. Clason, Dublin, at Victoria ink-holder.—W. Healy, Dorset-street, Salisbury-square, portable bathing-apparatus.—B. Barnard, A. Rosenthal, and G. Burton, Chesapeake, pearl eedger-machine.—B. Riego, Finsbury-square, German air-gun.—J. Ransom, Bury, air-holder for engraving print-rollers.—E. Davis, Leeds, pressure gauge.—W. H. Coningaby, Boston, portable mangle and linen press.

PROVISIONAL REGISTRATIONS.

Lewis, Lynton, multiplex coat.—J. Roberts, Portsmouth, Lieut. R.M.A., spur mechanics Magazine.

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